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WATER SUPPLY OUTLOOK FOR OREGON

U. S. DEPT. OF AGRICULTURE
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CURRENT SERIAL RECORDS

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF

FEB. 1, 1967

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

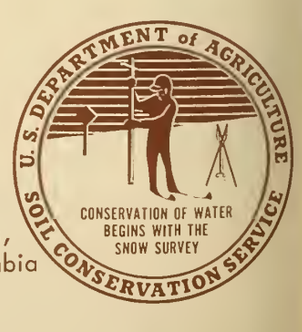
The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388 , Sacramento , California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



USDA-SCS-PORTLAND, OREG. 1966

WATER SUPPLY OUTLOOK
for
OREGON
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED

FEBRUARY 8, 1967

Report prepared by

W. T. FROST, Snow Survey Supervisor

and

TOMMY A. GEORGE, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

Issued by

A. J. WEBBER
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE

G. BURTON WOOD
DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

CHRIS L. WHEELER
STATE ENGINEER
STATE OF OREGON

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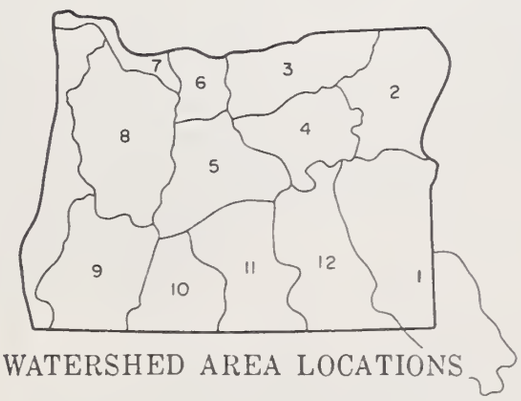
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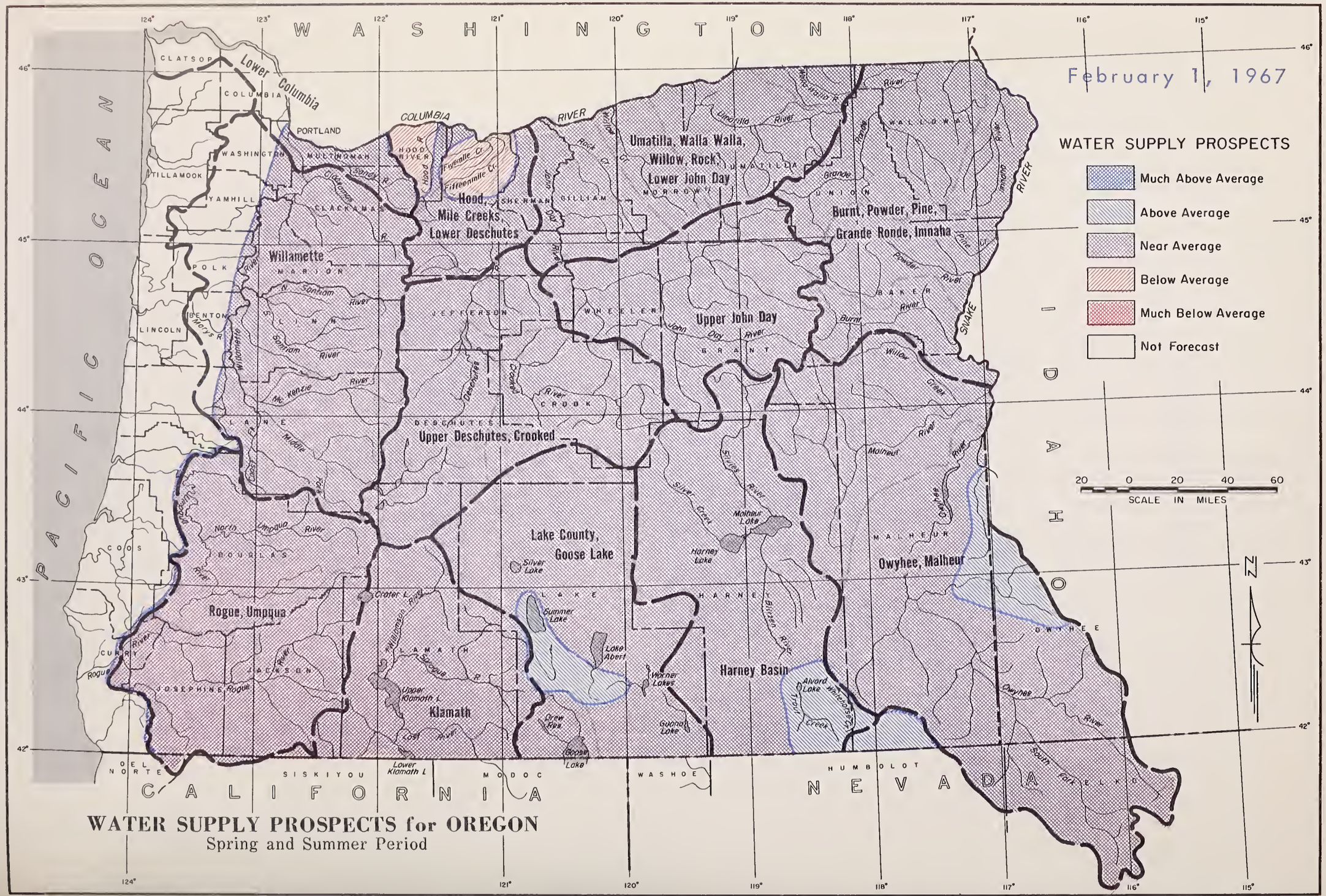
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MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)

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WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

February 1, 1967

Near average water supplies are expected in the spring and summer of 1967 for most Oregon farmers, ranchers, and other water users. Precipitation during January was generally 25% above normal over most of the state but near normal in the extreme northcentral portion. For the winter season beginning November 1 precipitation has ranged from about 20% above normal in the north to 40% above normal in the southern portion of the state. Snowpacks are surprisingly near average in water content in spite of warmer than usual temperatures. Watershed soils under the snowpack are well recharged and stored water supplies are sufficient except at Wallowa Lake, McKay and Fourmile Lake reservoirs.

SNOW COVER

Water content of the mountain snowpack about February first averaged about 100 percent of the usual February amount in the western and eastern thirds of the state; about 87 percent in the northcentral area and up to 132 percent in the southcentral area.

SOIL MOISTURE

Moisture in the top four feet of soil mantle under the snowpack is much nearer to total recharge than it was last year. The soils are wet enough that they will require much less than the average amount of water during the snow-melt season.

The above average temperatures during the past three winter months brought rainfall rather than snow over most of the snowpack on several occasions. This helped to recharge the soils.

RESERVOIR STORAGE

Water stored in 26 Oregon reservoirs, used primarily for irrigation, totals up to 97 percent of the 15-year average (1948-62) for February first and 91 percent of last year at this date. Most reservoirs will have sufficient water for a good season but storage in Wallowa Lake, McKay, and Fourmile Lake is extremely short and expected inflow is not likely to provide sufficient water for this season.

STREAMFLOW

Forecasted flow of Oregon streams for the spring and summer of 1967 is expected to provide sufficient water in most areas of the state except on the South Fork of the Walla Walla River, McKay Creek, and on Hood River, where streamflows are expected to be short in the latter part of the season.

continued --

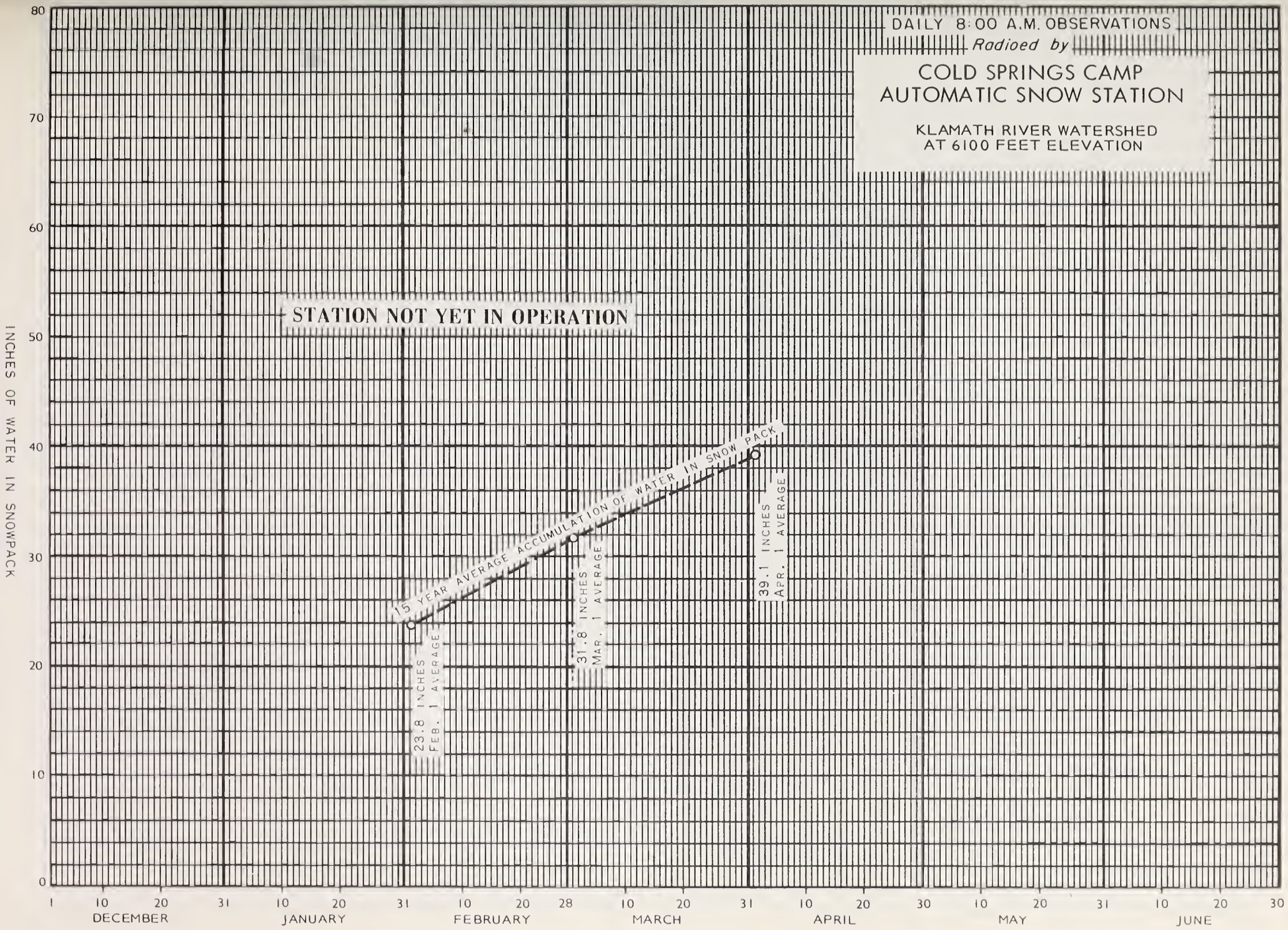
Some representative forecasts compared with the 15-year average (1948-62) are as follows:

Stream Station	Period	Percent Average
Inflow to Owyhee Reservoir	Feb.-July	122
Malheur near Drewsey	Feb.-July	119
Burnt near Hereford	Feb.-June	106
Powder near Baker	Apr.-Sept.	91
Grande Ronde at La Grande	March-Sept.	87
South Fork Walla Walla	March-Sept.	94
Umatilla at Pendleton	March-Sept.	97
John Day at Prairie City	March-July	104
Crooked near Post	Feb.-July	107
Deschutes at Benham Falls	Apr.-Sept.	107
Hood River near Hood River	Apr.-Sept.	80
Willamette at Salem	Apr.-Sept.	89
Rogue at Raygold	Apr.-Sept.	88
Inflow to Upper Klamath Lake	Feb.-Sept.	93
Chewaucan near Paisley	March-June	128
Silvies near Burns	March-June	114

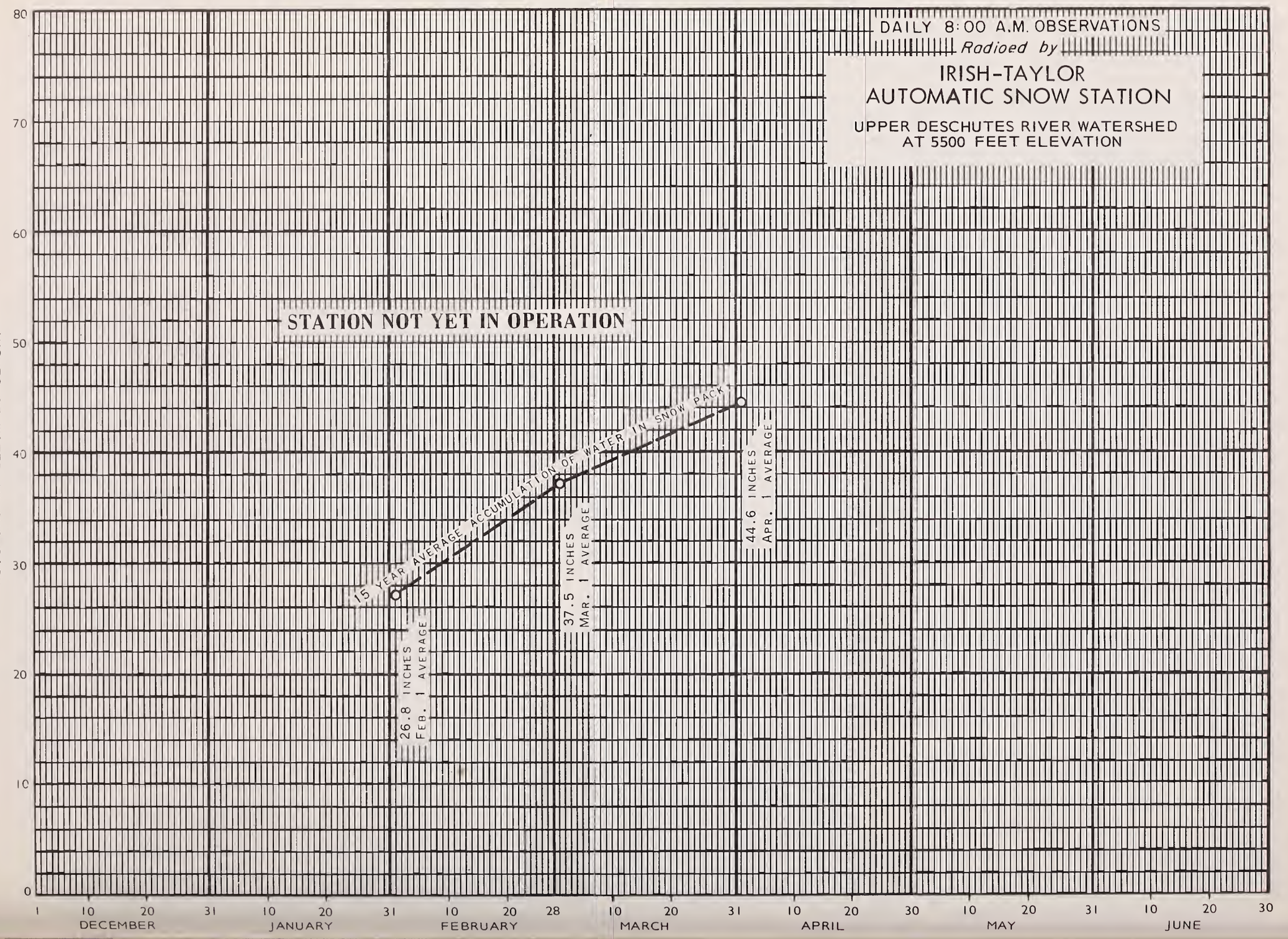
These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.



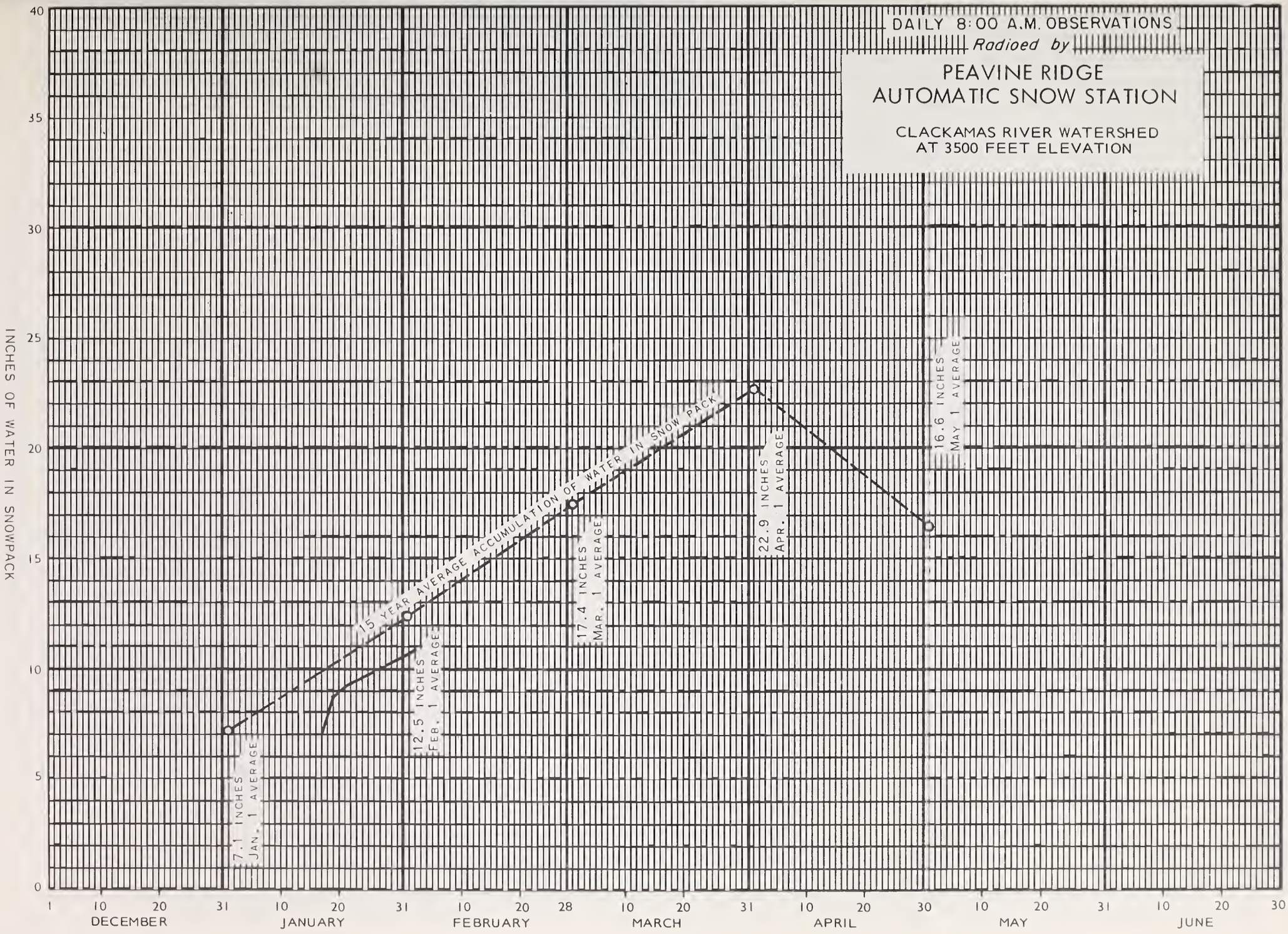
U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION



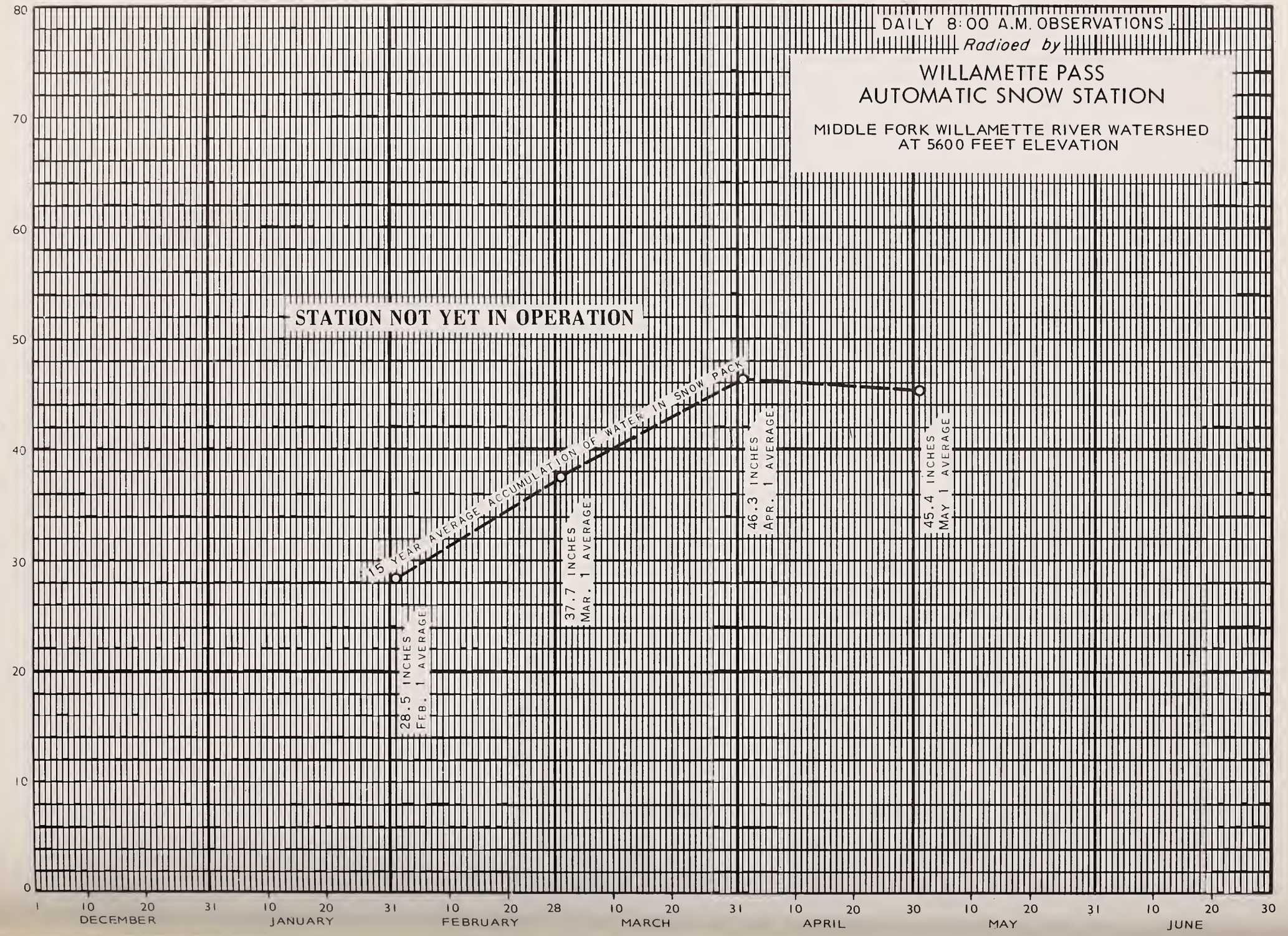
U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION



U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION

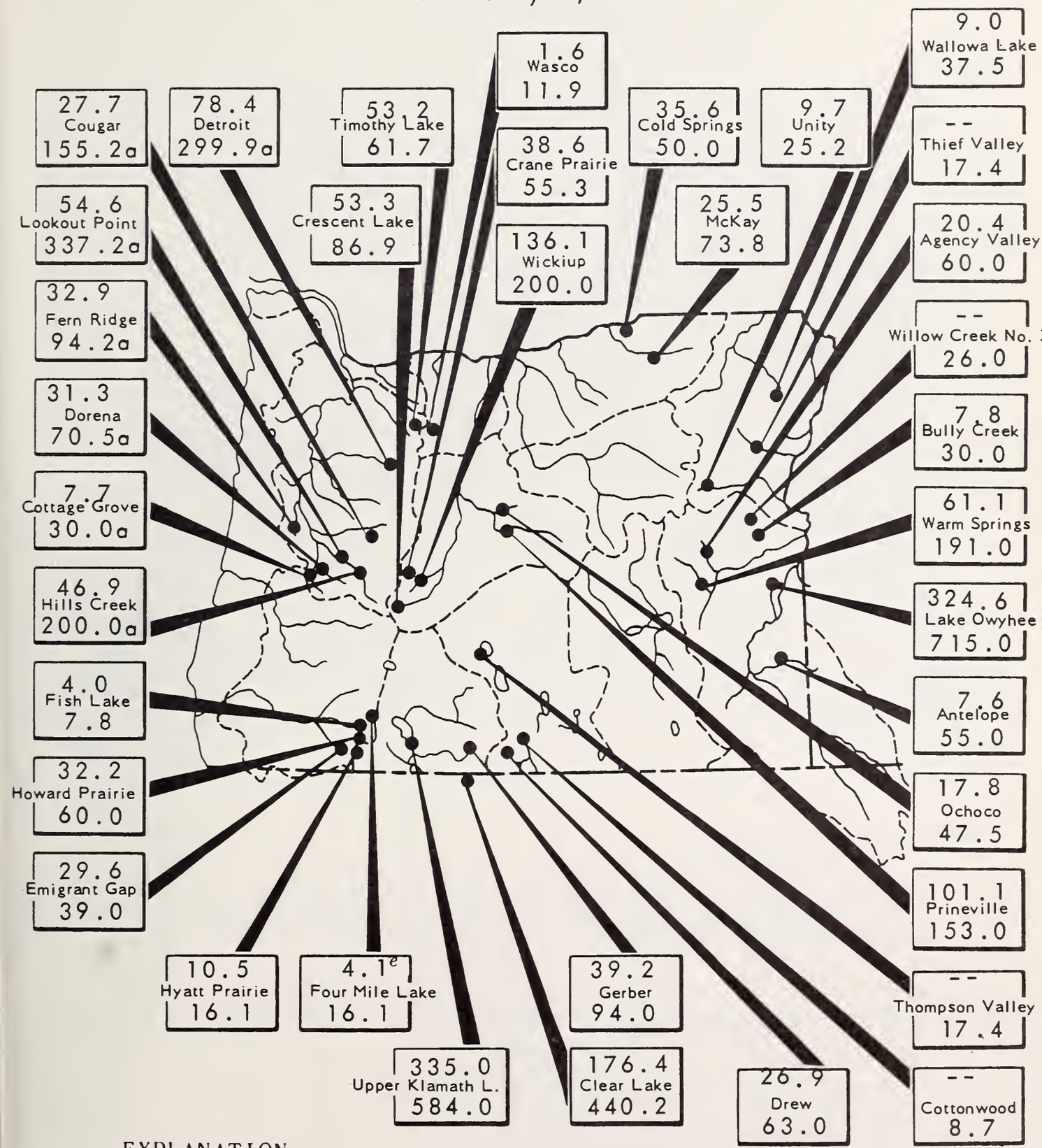


U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION



STORAGE STATUS of OREGON RESERVOIRS
usable contents in thousands of acre feet

February 1, 1967



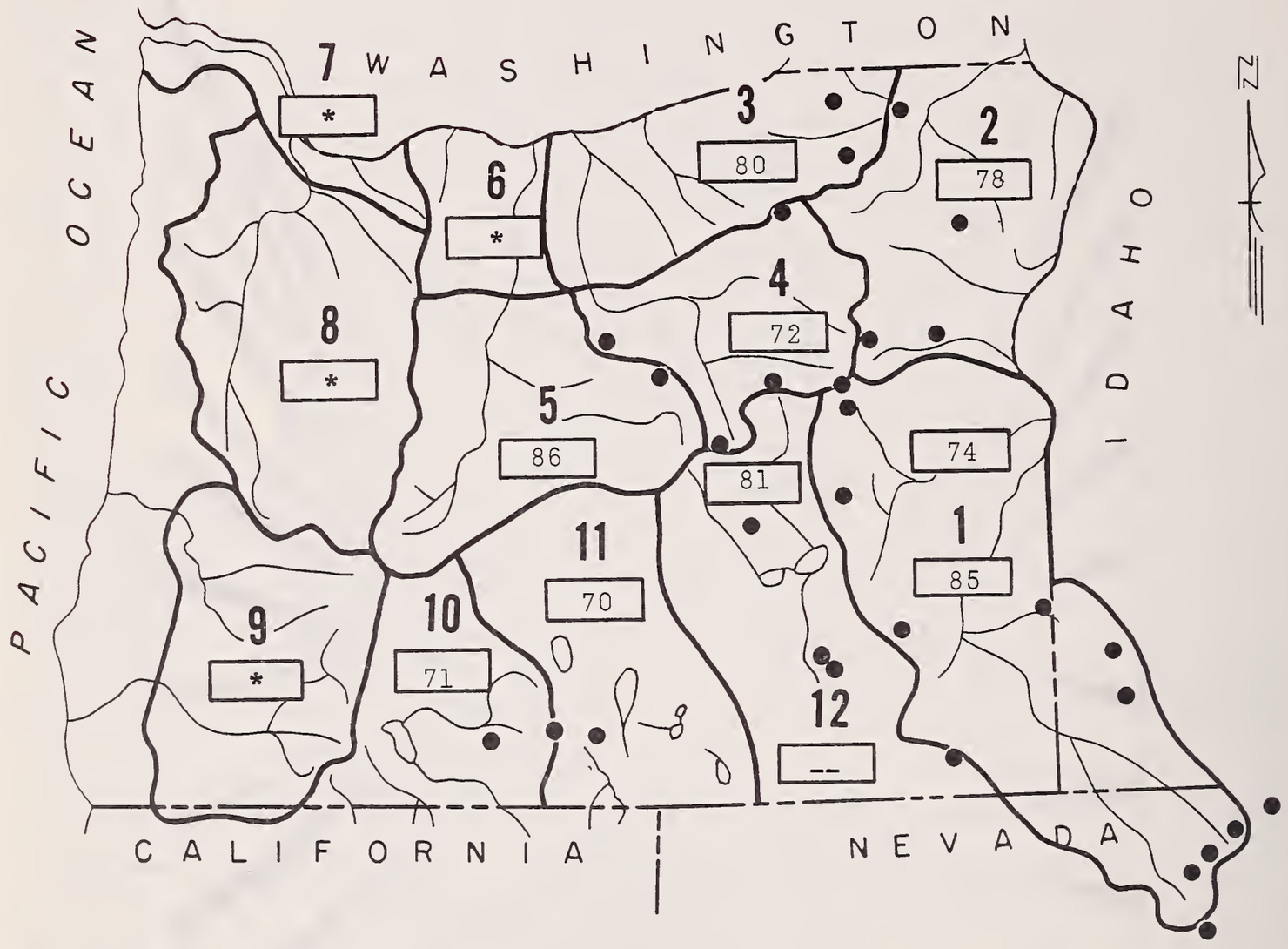
EXPLANATION

687.0 Lake Owyhee 715.0 ---Contents / ---Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report. (e) Estimated

MOUNTAIN SOIL MOISTURE in OREGON
as percent of capacity

February 1, 1967



● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON [a]

February 1, 1967

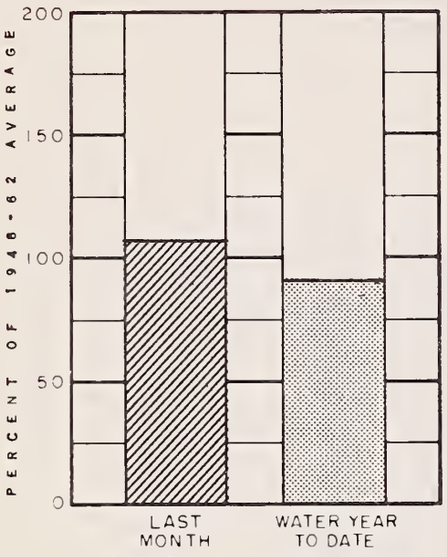


PRECIPITATION as PERCENT of the 1948-62 AVERAGE					
STATION	LAST MONTH	WATER YEAR TO DATE [b]	STATION	LAST MONTH	WATER YEAR TO DATE [b]
Baker Apt.	89	121	Lakeview	172	140
Bend	156	116	Meacham	171	150
Burns	137	127	Medford Apt.	157	131
Enterprise	88	96	Nyssa	107	112
Eugene Apt.	138	120	Pendleton Apt.	102	124
Heppner	97	133	Portland Apt.	102	103
John Day	95	109	Salem Apt.	101	69
Klamath Falls Apt.	107	106	The Dalles	56	99
			Owyhee (Nev.)	109	91

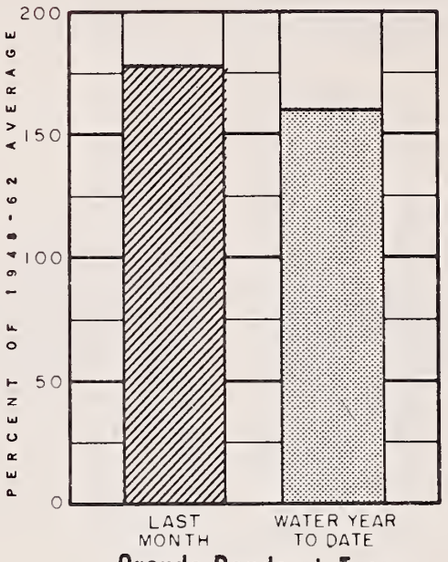
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

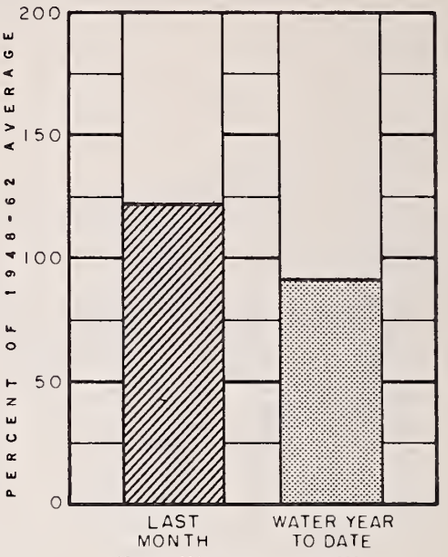
February 1, 1967



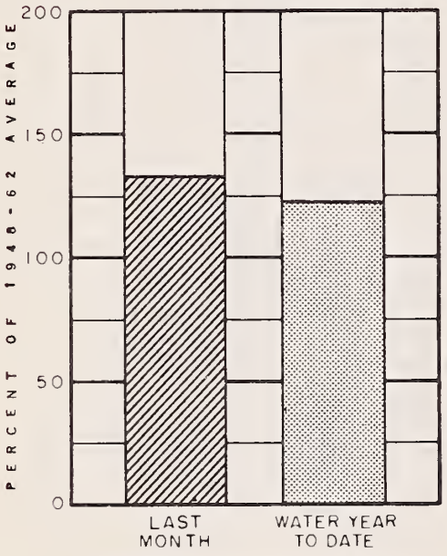
Owyhee Lake net inflow



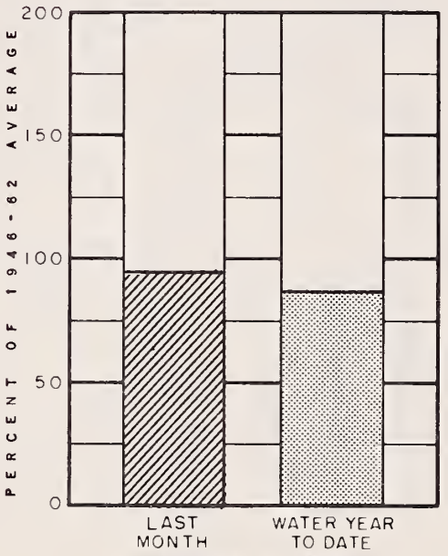
Grande Ronde at Troy



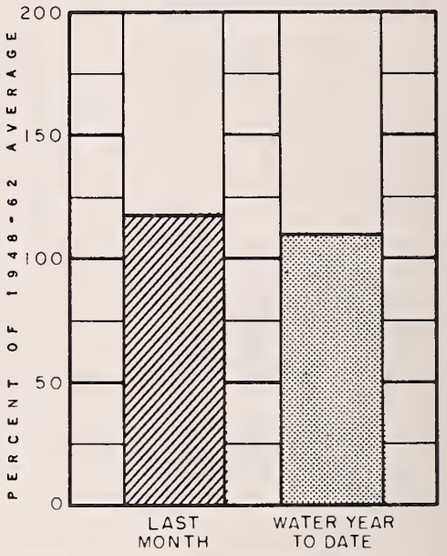
Umatilla at Umatilla



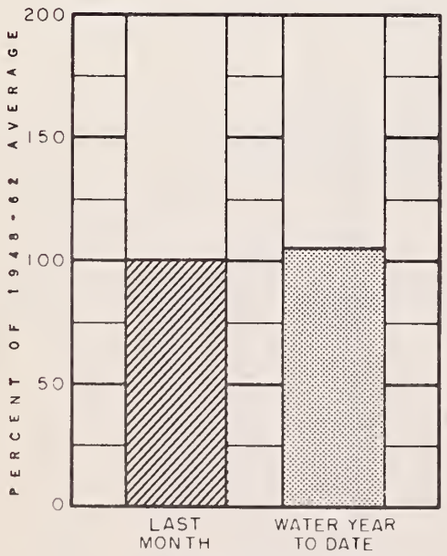
John Day at Service Creek



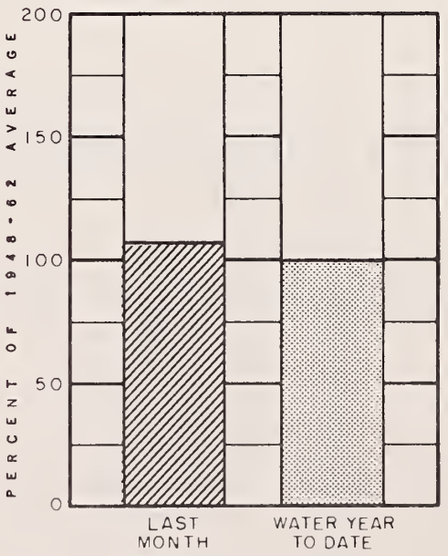
Deschutes at Moody



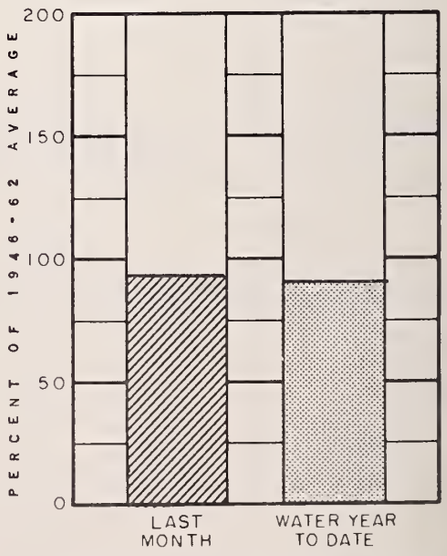
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.



WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Malheur County are greatly encouraged by water supply conditions for 1967. Generous increases in rain and snowfall during the last two weeks of January have improved the water supply outlook to slightly better than average for most Malheur County lands.

SNOW COVER

Water content of the mountain snowpack is now equal to the 15-year average (1948-62) for February 1 with slightly more snow-stored water held in the snow on the Owyhee watershed. This year's snowpack contains about thirty-five percent more water than last year's pack on this date.

SOIL MOISTURE

Watershed soils under the snowpack are wet up to 74 percent of capacity on Malheur watersheds and about 85 percent on the Owyhee. Soil moisture is now equal to last year on the Owyhee but about 12 percent greater on the Malheur than one year ago.

RESERVOIR STORAGE

Reservoired water supplies are close to their 15-year average for February first. Warmsprings now contains 61,125 acre feet compared with 146,000 a.f. one year ago. Agency Valley reservoir contains 20,400 acre feet now compared with 26,300 a.f. last year. And Bully Creek reservoir contains 7,755 acre feet compared with 17,700 acre feet one year ago. Stored water now on hand for the Warmsprings and Vale Oregon Irrigation Districts totals 89,280 acre feet compared with 190,000 a.f. last year on this date.

Lake Owyhee now contains 324,600 acre feet compared with 268,200 a. f. a year ago. And Antelope reservoir contains 7,615 acre feet.

STREAMFLOW

Forecasts of expected streamflow in Malheur County for the February through July period are as follows:

Station	Volume	Percent of 1948-62 Average
Malheur River near Drewsey	145,000 acre feet	119 percent
Malheur, North Fork at Beulah	90,000 acre feet	114 percent
Lake Owyhee, net inflow	650,000 acre feet	122 percent
Jordan Creek above Lone Tree	*128,000 acre feet	110 percent

*This forecast is for the March through July period.

These forecasts are made on the assumption that near average conditions of temperature and precipitation will prevail from now through June.

Flow of the Owyhee River into Lake Owyhee[1] was 107 percent average in January and has been 92 percent average for the period October 1 through January.

[1] Preliminary data provided by North Board of Control, Nyssa, Oregon.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Excellent	Average
Bully Creek	Average	Average
Cow Creek	Excellent	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Excellent	Average
McDermitt Creek	Excellent	Average
Oregon Canyon Creek	Excellent	Average
Owyhee Project	Average	Average
Succor Creek	Excellent	Average
Tenmile Creek	Excellent	Average
Vale-Oregon Irrig. Dist.	Average	Average
Warmsprings Irrig. Dist.	Average	Average
Willow Creek (Reservoired)	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Agency Valley	60.0	20.4	26.3	21.8 [m]
Antelope	55.0	7.6	[b]	5.9 [m]
Bully Creek	30.0	7.8	17.7	- -
Owyhee	715.0	324.6	268.2	345.5
Warmsprings	191.0	61.1	146.0	52.5
Willow Creek #3	26.0	[b]		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE [i]
NO.	NAME				
1780	Jordan Creek above Lone Tree Creek	128	March-July	116	110
2140	Malheur near Drewsey	145	Feb.-July	122	119
		91	April-Sept.	82	111
2175	Malheur, North Fork at Beulah [d]	90	Feb.-July	79	114
		73	April-Sept.	65	112
1825	Owyhee Reservoir net Inflow [k]	650	Feb.-July	533	122
		343	April-Sept.	381	90

SOIL MOISTURE

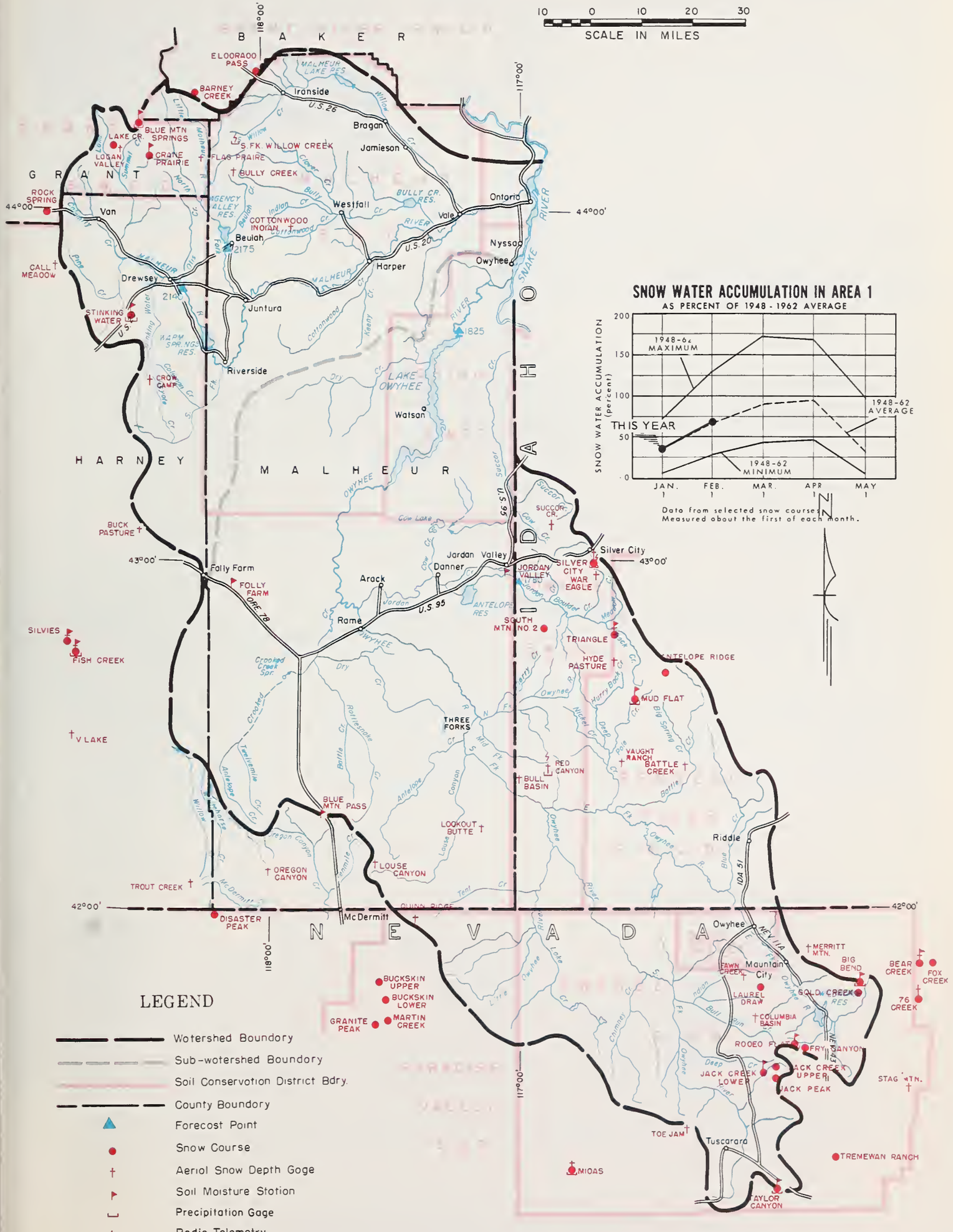
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bear Creek (Nev.)	7800	72	16.8	[c]			
Big Bend (Nev.)	6700	48	16.7	1-31-67	15.3	14.9	16.5
Blue Mountain Springs	5900	42	16.9	1-30-67	9.7	6.8	13.0
Crane Prairie	5375	48	18.2	1-30-67	16.1	14.8	16.0 [f]
Folly Farm	4450	30	12.5	[c]			
Jack Creek, Lower (Nev.)	6800	48	8.6	[c]			
Jordan Valley	4390	48	19.3	2-1-67	14.7	- -	14.7 [f]
Mud Flat (Ida.)	5500	48	12.8	1-28-67	12.2	10.7	13.4
Rodeo Flat (Nev.)	6800	42	11.0	12-29-66	10.5 [f]	10.6	11.0
Stinking Water Summit	4800	48	21.9	[b]			
Taylor Canyon (Nev.)	6200	48	15.1	1-30-67	12.1	12.3	15.0 [f]
Triangle (Ida.)	5150	48	16.6	[c]			

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1948-62 AVERAGE
Antelope Ridge (Ida.)	5900	1/28	22	5.9	- -	- -
Barney Creek	5950	1/31	24	7.1	- -	- -
Battle Creek [e] (Ida.)	5700	2/5	12	3.6	1.3	- -
Bear Creek [e] (Nev.)	7800	1/30	51	15.6	9.8	11.7 [h]
Big Bend (Nev.)	6700	1/31	23	5.3	3.4	6.4 [h]
Blue Mountain Springs	5900	1/30	36	10.8	6.3	10.8
Buck Pasture [e]	5700	2/5	9	2.7	1.3	- -
Buckskin, Lower (Nev.)	6700	[c]				
Buckskin, Upper (Nev.)	7200	[c]				
Bull Basin [e] (Ida.)	5600	2/5	2	0.6	0.4	- -
Bully Creek [e]	5300	2/5	8	2.4	0.2	3.0 [m]
Call Meadow [e]	5340	2/5	10	3.0	1.8	- -
Columbia Basin [e] (Nev.)	6650	2/4	27	6.7	2.6	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Cottonwood-Indian [e]	4320	2/5	T	T	0.0	- -
Crane Prairie	5375	c				
Crow Camp [e]	5500	2/5	4	1.2	1.2	- -
Disaster Peak (Nev.)	6500	c				
Eldorado Pass	4600	1/30	11	4.0	2.0	2.6 [h]
Fawn Creek [e] (Nev.)	7000	2/4	18	4.5	2.4	- -
Fish Creek [e]	7900	2/5	57	17.1	9.6	- -
Flag Prairie [e]	4750	2/5	12	3.6	1.2	- -
Fox Creek (Nev.)	6800	c				
Fry Canyon (Nev.)	6700	2/1	23	6.0	5.0	6.0 [h]
Gold Creek (Nev.)	6600	1/31	16	3.6	2.1	4.7 [h]
Granite Peak (Nev.)	7800	1/30	51	15.3	5.7	7.5 [h]
Hyde Pasture [e] (Ida.)	5800	2/5	18	5.4	2.3	- -
Jack Creek, Lower (Nev.)	6800	c				
Jack Creek, Upper (Nev.)	7250	c				
Jack Peak (Nev.)	8420	c				
Lake Creek R.S.	5120	1/30	24	7.0	3.8	5.8 [m]
Laurel Draw [e] (Nev.)	6700	b				
Logan Valley [e]	5100	2/5	18	5.4	2.8	4.8 [m]
Lookout Butte [e]	5650	2/5	0	0.0	0.2	- -
Louse Canyon [e]	6440	2/5	24	7.2	2.5	- -
Martin Creek (Nev.)	6700	1/30	37	12.2	4.0	5.8 [h]
Merritt Mountain [e] (Nev.)	7000	2/4	23	5.3	T	- -
Midas [e] (Nev.)	7200	2/4	12	3.0	1.0	- -
Mud Flat (Ida.)	5500	1/28	20	4.6	2.6	- -
Oregon Canyon [e]	6950	2/5	28	8.4	1.1	- -
Quinn Ridge [e] (Nev.)	6300	2/5	10	3.0	0.6	- -
Red Canyon [e] (Ida.)	6500	2/5	19	5.7	3.4	- -
Rock Spring	5100	1/30	14	4.0	3.5	4.2
Rodeo Flat (Nev.)	6800	2/1	18	4.5	3.4	5.6 [h]
76 Creek [e] (Nev.)	7100	1/30	29	6.7	4.2	7.4 [h]
Silver City (Ida.)	6400	1/30	35	11.8	6.2	9.7 [h]
Silvies [e]	6900	2/5	8	2.4	2.3	- -
South Mountain #2 (Ida.)	6340	2/1	32	9.6	3.7	7.4
Stag Mountain [e] (Nev.)	7800	2/4	18	4.1	1.4	- -
Stinking Water	4800	1/30	6	2.0	1.6	3.3 [h]
Succor Creek [e] (Ida.)	6100	2/5	22	6.6	3.1	- -
Taylor Canyon (Nev.)	6200	1/30	27	6.0	3.9	3.9 [h]
Toe Jam [e] (Nev.)	7700	2/4	34	7.5	4.6	- -
Tremewan Ranch (Nev.)	5700	1/30	14	2.4	2.2	1.7 [h]
Triangle [e] (Ida.)	5150	2/5	T	T	T	- -
Trout Creek [e]	7800	2/5	32	9.6	1.8	- -
"V" Lake [e]	6600	2/5	22	6.6	1.7	- -
Vaught Ranch [e] (Ida.)	5950	2/5	12	3.6	1.1	- -
War Eagle [e] (Ida.)	7700	2/5	67	20.1	10.8	- -

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Baker, Union and Wallowa counties can expect near average water supplies in the spring and summer of 1967 if weather trends continue about average. Mountain snowpacks have accumulated at a near normal rate except at the lowest elevations where rain has fallen instead. Soil moisture conditions are very good and reservoired water supplies are satisfactory except in Wallowa Lake.

SNOW COVER

Water content of the mountain snowpack is now equal to the 15-year average (1948-62) for the first of February and is 30 percent greater than this date last year.

SOIL MOISTURE

Watershed soils under the snowpack have increased about 5 percent in moisture content and are now wet up to 78 percent of capacity compared with 66 percent last year on this date.

RESERVOIR STORAGE

Reservoired water supplies are satisfactory in Unity reservoir which contains 9,700 acre feet compared with 11,900 a year ago and 6,700 a.f. which is average. Wallowa Lake storage is only 9,000 acre feet compared with 17,700 a.f. which is average and much less than the 31,400 acre feet held there last year. This is the lowest storage since 1952 for Wallowa Lake when 5,360 a.f. were reported.

STREAMFLOW

Forecasts of expected streamflow for the 1967 April through September period are as follows:

Station	Volume	Percent of 1948-62 Average
Burnt River near Hereford	42,000 acre feet	102 percent
Powder River near Baker	61,000 acre feet	91 percent
Grande Ronde at La Grande	166,000 acre feet	82 percent
Catherine Creek near Union	81,000 acre feet	110 percent
East Fork Wallowa River near Joseph	12,900 acre feet	107 percent
Hurricane Cr. near Joseph	46,500 acre feet	97 percent
Lostine River near Lostine	142,000 acre feet	108 percent
Bear Creek near Wallowa	76,000 acre feet	106 percent
Imnaha River at Imnaha	360,000 acre feet	113 percent

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

Preliminary data from U. S. Geological Survey indicates flow of the Grande Ronde at La Grande was 179 percent average in January and has averaged 165 percent from October 1, 1966 to January 31, 1967.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Average
Baker Valley	Average	Fair
Big Creek	Average	Average
Clover Cr. (nr. N. Powder)	Average	Average
Cove	Average	Average
Durkee	Average	Average
Eagle Valley	Average	Average
Elgin	Average	Fair
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
LaGrande-Island City	Average	Fair
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Average	Average
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Fair
Summerville	Average	Fair
Sumpter Valley	Average	Fair
Union-Hot Lake	Average	Average
Unity	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Thief Valley	17.4	*b*		
Unity	25.2	9.7	11.9	6.7
Wallowa Lake	37.5	9.0	31.4	17.7

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
3305	Bear near Wallowa	76	April-Sept.	72	106
2730	Burnt near Hereford[d]	56	Feb.-June	53	106
		42	April-Sept.	41	102
3200	Catherine near Union	81	April-Sept.	73	110
3190	Grande Ronde at LaGrande	214	March-Sept.	246	87
		166	April-Sept.	203	82
3295	Hurricane near Joseph	46.5	April-Sept.	48	97
2920	Imnaha at Imnaha	360	April-Sept.	318	113
3300	Lostine near Lostine	142	April-Sept.	131	108
2755	Powder near Baker	60	April-July	66	91
		61	April-Sept.	67	91
3250	Wallowa, East Fork near Joseph[d]	13.2	Feb.-Sept.	13.4	98
		12.9	April-Sept.	12.0	107

SOIL MOISTURE

STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Summit	5100	36	16.8	1-30-67	11.2	9.0	12.3
Emigrant Springs	3925	48	22.3	1-26-67	19.4	14.7	21.9
Tollgate	5070	48	23.6	1-27-67	18.6	17.7	19.0

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS


10 0 10 20 30
SCALE IN MILES
WASHINGTON
IDAHO
46°00'
45°00'
117°00'
118°00'
UMATILLA
UNION
WALLOWA
GRANT
BAKER
MALHEUR
TOLLGATE
Lookingglass
Wenaha R.
S. Fk.
N. Fk.
ORE. 204
Elgin
Phillips
Summerville
MEACHAM
U.S. 30
ORE 82
La Grande
Starkey
LUCKY STRIKE
SCHOOLMARM
COUNTY LINE
BEAVER RES.
Cove
MOSS SPRING
BALO MTN.
Union
LADD SUMMIT
Catherine Cr.
MIRROR LAKE
Wallowa
Whisky Cr.
Big Canyon Cr.
Joseph Cr.
Courtney Cr.
Mud Cr.
Tope Cr.
Chesnimnus Cr.
Swamp Cr.
Cherry Cr.
Lightning Cr.
Horse Cr.
Imnaha
3920
Imnaha River
Enterprise
TV RIDGE
3295
STANDLEY
3305
3300
Joseph
ANEROID LAKE NO. 2
ANEROID LAKE NO. 1
BIG SHEEP
3250
3200
3190
TAYLOR GREEN
THIEF VALLEY RES.
North Powder
Medical Springs
LITTLE ANTONE
ANTHONY LAKE
LITTLE ALPS
ANTHONY SKI HILL
INTAKE HOUSE
POWER PLANT
Haines
EILERTSON MEADOWS
BOURNE
GOLD CENTER
GOODRICH LAKE
Baker
Keating
Halfway
Pine
Richland
SCHNEIDER MEADOWS
OXBOW RES.
BROWNLEE RES.
Sumpter
TIPTON
BLUE MTN SUMMIT
UNITY RES.
2730
2755
DOOLEY MTN
Durkee
Hereford
Bridgeport
Unity
BARNEY CREEK
ELDORADO PASS
Huntington
Burnt River
Powder River
Snake River
Grande Ronde R.
Eagle Cr.
Pine Cr.
Rock Cr.
Muddy Cr.
Elk Cr.
Deer Cr.
Salmon Cr.
Ruckles Cr.
Lawrence Cr.
Durkee Cr.
Dixie Cr.
Birch Cr.
Sisley Cr.
Job Cr.
Comp Cr.
Clover Cr.
Wolf Cr.
Sheep Cr.
Fly Cr.
Meadow Cr.
McCoy Cr.
Beaver Cr.
Jordan Cr.
Rock Cr.
Lostine River
Hurricane Cr.
Bear Cr.
Indian Cr.
Clark Fork
Big Creek
Phillips Cr.
Ruckles Cr.
Powder River
Pine Cr.
Eagle Cr.
Goose Cr.
Big Sheep Cr.
Little Sheep Cr.
Grouse Cr.
Camp Cr.
Horse Cr.
Lightning Cr.
Cherry Cr.
Swamp Cr.
Chesnimnus Cr.
Joseph Cr.
Mud Cr.
Tope Cr.
Courtney Cr.
Wallowa River
Wallowa Cr.
Big Canyon Cr.
Whisky

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Aneroid Lake #1	7480	1/29	98	29.0[j]	21.2	24.2
Aneroid Lake #2	7300	1/30	93	28.0[j]	19.8	21.6
Anthony Lake	7125	1/31	64	21.7	12.8	17.3[h]
Anthony Ski Hill		1/29	66	22.2	14.2	- -
Bald Mountain[e] (Ore.)	6700	1/30	59	19.5	8.1	- -
Barney Creek	5950	1/31	24	7.1	- -	- -
Beaver Reservoir	5340	1/26	28	7.1	6.3	7.7
Big Sheep[e]	6200	1/30	69	22.1	13.8	- -
Blue Mountain Summit	5098	1/30	20	5.8	4.2	6.1
Bourne	5800	1/27	41	10.1	7.5	11.4[h]
County Line	4800	1/30	10	3.0	4.2	4.7[h]
Dooley Mountain	5430	1/25	23	6.0	3.6	6.0
Eilertson Meadows	5400	1/26	34	9.3	7.5	8.1[h]
Eldorado Pass	4600	1/30	11	4.0	2.0	2.6[h]
Gold Center	5340	1/27	30	8.2	6.6	9.1
Goodrich Lake	6775	[b]				
Intake House	4930	1/26	32	8.2	8.1	- -
Little Alps	6200	1/31	34	10.4	5.5	- -
Little Antone	5000	1/31	18	5.7	4.3	- -
Lucky Strike	5050	1/31	28	7.6	7.2	8.7[h]
Meacham	4300	1/27	25	6.8	5.6	6.8
Mirror Lake[e]	8200	1/30	162	48.6	21.0	- -
Moss Springs	5850	1/30	56	17.8	8.8	16.5
Power Plant	3990	1/26	17	5.0	4.0	- -
Schneider Meadows	5400	1/30	69	24.6	13.5	20.8
Schoolmarm	4775	1/30	9	2.9	4.1	4.1[h]
Standley	7400	1/30	80	24.8	10.5	- -
Taylor Green	5740	1/30	37	12.8	7.2	- -
Tipton	5100	1/30	24	6.7	5.7	7.6[h]
Tollgate	5070	1/27	56	17.1	13.1	18.3
TV Ridge	7000	1/30	51	15.8	7.2	- -

"The Conservation of Water begins with the Snow Survey"



Area 3

WATER SUPPLY OUTLOOK
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
OREGON

as of
February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Umatilla, Morrow and Gilliam counties can expect slightly below average water supplies next spring and summer if weather trends continue about average. If weather continues much warmer than normal there will be greatly reduced streamflow in the summer.

SNOW COVER

Water content of the mountain snowpack on local watersheds averages 88 percent of the usual February first amount--a slight improvement over the 80 percent snow cover on February first of last year. Above normal temperatures are still preventing usual snowfall accumulation.

SOIL MOISTURE

Above normal temperatures and rainfall have permitted a greater than usual moisture penetration in watershed soils. These soils are now wet up to 80 percent of capacity compared with 74 percent last year.

RESERVOIR STORAGE

Inflow to McKay reservoir was about 14,000 acre feet or 158 percent of the 15 year average (1948-62) in January because of above normal temperatures and precipitation. However, storage in McKay was only 25,460 acre feet at the end of January compared with 26,000 a.f. one year ago.

Storage in Coldsprings reservoir is 35,550 acre feet compared with 26,000 acre feet on February first last year.

STREAMFLOW

Forecasts of expected streamflow for the 1967 April through September period are as follows:

Station	Volume	Percent of 1948-62 Average
South Fork Walla Walla nr. Milton	71,000 acre feet	93 percent
Umatilla River at Pendleton	181,000 acre feet	99 percent
McKay Creek nr. Pilot Rock	29,000 acre feet	91 percent
Butter Creek near Pine City	*15,700 acre feet	108 percent

*This forecast is for the March through July period.

Inflow to McKay reservoir February through July is forecast at 56,000 acre feet or 90 percent of the average.

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of this forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Birch Creek	Average	Average
Butter Creek	Average	Average
Couse Creek	Average	Average
Dry Creek	Average	Average
Dugger Creek	Average	Average
Johnson Creek	Average	Average
McKay Creek	Average	Average
Mill Creek	Average	Average
Mud Creek	Average	Average
Pine Creek	Average	Average
Rhea Creek	Average	Average
Rock Creek	Average	Average
Umatilla R. (Cold Springs Reservoir)	Average	Average
Umatilla River, Main	Average	Average
Umatilla River (McKay Res.)	Average	Average
Walla Walla River, Little	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, No. Fk.	Average	Average
Walla Walla River, So. Fk.	Average	Average
Willow Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cold Springs	50.0	35.6	26.0	29.6
McKay	73.8	25.5	26.0	29.1

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0320	Butter Creek near Pine City	15.7	March-July	14.5	108
0225	McKay near Pilot Rock	56	Feb.-July	62	90
		29	April-Sept.	32	91
0200	Umatilla near Gibbon	111	March-Sept.	116	96
		90	April-Sept.	93	97
0210	Umatilla at Pendleton	239	March-Sept.	247	97
		181	April-Sept.	183	99
0100	Walla Walla, South Fork near Milton	84	March-Sept.	89	94
		71	April-Sept.	76	93

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Athena-Weston	1700	48	18.7	1-27-67	11.2	13.7	14.6
Battle Mountain Summit	4340	48	13.8	1-26-67	13.8	11.7	13.8
Emigrant Springs	3925	48	22.3	1-26-67	19.4	14.7	21.9
Tollgate	5070	48	23.6	1-27-67	18.6	17.7	19.0

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Arbuckle Mountain	5400	1/30	20	6.1	7.8	8.3
Battle Mountain Summit	4340	1/26	12	2.0	1.7	2.2[m]
Blue Mtn. Camp	4300	1/27	33	11.6	9.6	- -
Emigrant Springs	3925	1/26	18	4.0	4.1	5.4
Lucky Strike	5050	1/31	28	7.6	7.2	8.7[h]
Meacham	4300	1/27	25	6.8	5.6	6.8
Tollgate	5070	1/27	56	17.1	13.1	18.3
Walla Walla Diversion	2400	1/31	0	0.0	4.0	2.0[h]
Weston Mountain	2700	1/27	0	0.0	1.0	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

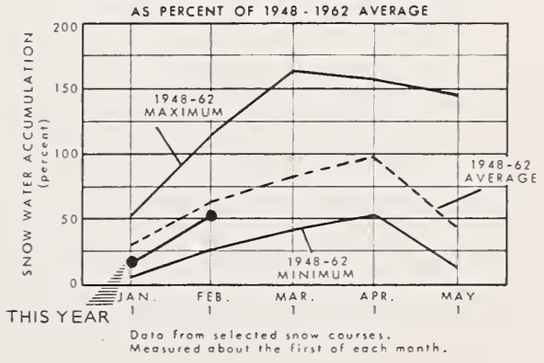


LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.



WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of
February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in the John Day basin can expect near average water supplies next spring and summer if weather trends continue close to average. If weather should continue much warmer than normal there will be greatly reduced streamflow in the summer.

SNOW COVER

Water content of the mountain snowpack on local watersheds is now about 94 percent of the February first average--a real improvement over the 78 percent measured one year ago. Above normal temperatures are preventing normal accumulation of snow cover at the lower elevations.

SOIL MOISTURE

The upper four feet of the soil mantle in the upper watersheds under the snowpack are now wet up to 81 percent of capacity compared with only 65 percent last year at this date. This excellent soil moisture will facilitate snow-melt runoff in the spring and will favor good range conditions.

STREAMFLOW

Forecasts of expected streamflow for the 1967 April through September period are as follows:

Station	Volume	Percent of 1948-62 Average
John Day River at Prairie City	52,000 acre feet	102 percent
Strawberry Creek near Prairie City	8,500 acre feet	96 percent
Middle Fork John Day at Ritter	131,000 acre feet	100 percent

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Average	Fair
Beech Creek-Fox-Long Cr.	Average	Fair
Bridge-Mountain Creeks	Average	Average
Camas Creek	Average	Fair
Cherry Creek	Average	Average
Indian-Pine Creeks	Average	Average
John Day River, Main Fork	Average	Average
John Day River, Mid. Fork	Average	Average
John Day River, N. Fork	Average	Average
John Day River, S. Fork	Average	Average
Monument-Kimberly	Average	Average
Strawberry Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
0385	John Day at Prairie City	58	March-July	56	104
		52	April-Sept.	51	102
0440	John Day, Middle Fork at Ritter	156	March-July	153	102
		131	April-Sept.	131	100
0375	Strawberry near Prairie City	7.9	March-July	8.2	96
		8.5	April-Sept.	8.8	96

SOIL MOISTURE

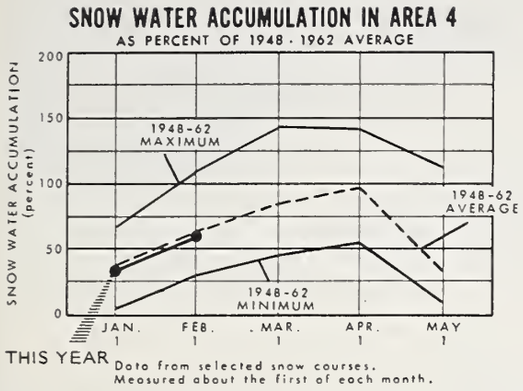
STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mountain Summit	4340	48	13.8	1-26-67	13.8	11.7	13.8
Blue Mountain Springs	5900	42	16.9	1-30-67	9.7	6.8	13.0
Blue Mountain Summit	5100	36	16.8	1-30-67	11.2	9.0	12.3
Derr	5670	24	9.0	1-30-67	7.9	6.8	8.4
Marks Creek	4540	36	14.1	1-27-67	12.1	11.3	13.8
Snow Mountain	6300	48	16.7	2-2-67	14.3	12.0	16.3
Starr Ridge	5150	36	10.6	1-31-67	10.4	6.4	10.3

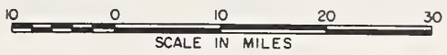
SNOW

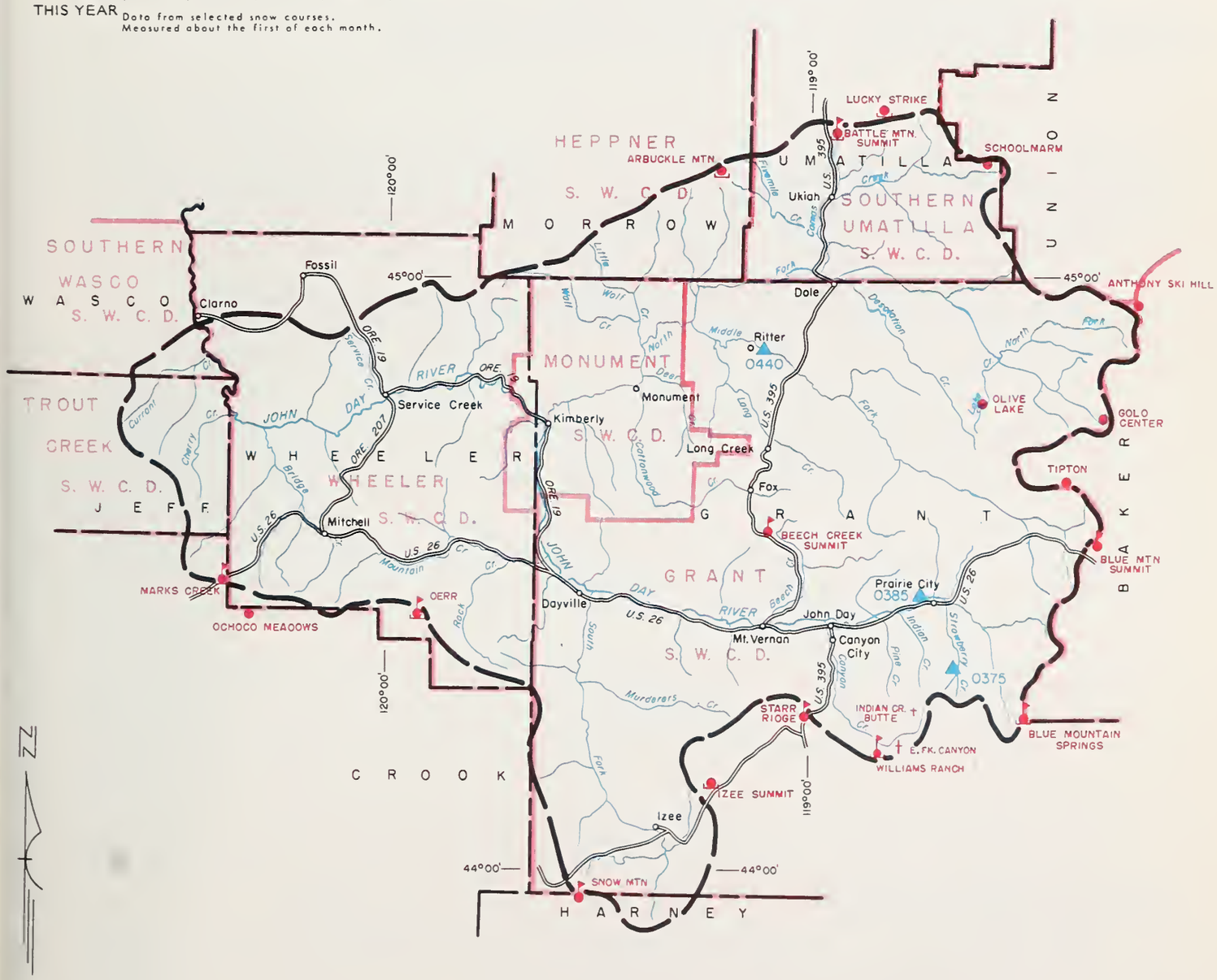
SNOW COURSE NAME	SNOW COURSE ELEVATION	CURRENT INFORMATION DATE OF SURVEY	CURRENT INFORMATION SNOW DEPTH (Inches)	CURRENT INFORMATION WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	PAST RECORD WATER CONTENT (Inches) 1948-62 AVERAGE
Anthony Lake	7125	1/31	64	21.7	12.8	17.3[h]
Arbuckle Mountain	5400	1/30	20	6.1	7.8	8.3
Battle Mountain Summit	4340	1/26	12	2.0	1.7	2.2[m]
Beech Creek Summit	4800	1/27	13	3.4	2.9	4.3[h]
Blue Mountain Springs	5900	1/30	36	10.8	6.3	10.8
Blue Mountain Summit	5098	1/30	20	5.8	4.2	6.1
Derr	5670	1/30	26	7.6	7.0	6.9
East Fork Canyon[e]	5700	1/30	18	4.9	4.4	- -
Gold Center	5340	1/27	30	8.2	6.6	9.1
Indian Creek Butte[e]	6550	1/30	60	16.2	9.5	- -
Izee Summit	5293	1/27	24	6.5	3.8	6.2[h]
Lucky Strike	5050	1/31	28	7.6	7.2	8.7[h]
Marks Creek	4540	1/27	16	5.1	5.4	3.6
Ochoco Meadows	5200	2/1	29	8.1	8.4	7.8
Olive Lake	6000	1/26	45	13.1	9.4	13.0
Schoolmarm	4775	1/30	9	2.9	4.1	4.1[h]
Snow Mountain	6300	2/2	36	10.9	6.9	- -
Starr Ridge	5150	1/31	16	3.6	3.1	4.6[h]
Tipton	5100	1/30	24	6.7	5.7	7.6[h]
Williams Ranch	4500	1/30	0	0.0	1.8	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS







LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aeriol Snow Depth Gage
- Precipitation Gage

OR-4c



WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and water users in the mid-state area of Crook, Deschutes and Jefferson Counties can expect near average water supplies next spring and summer if weather trends continue close to average. If temperatures should continue much warmer than normal there will be heavy reductions in streamflow next summer.

SNOW COVER

Water content of the mountain snowpack on local watersheds is now about 100 percent of the February first average--not quite as much as the 110 percent measured one year ago.

SOIL MOISTURE

The upper four feet of the soil mantle under the snowpack are now wet up to 86 percent of capacity compared with only 76 percent last year at this date. This excellent soil moisture will favor runoff from snow-melt in the spring.

RESERVOIR STORAGE

Stored water in Crooked River reservoirs is near average on February first. Ochoco reservoir held 17,850 acre feet compared with 23,700 a.f. last year. Prineville reservoir contained 100,139 acre feet at the beginning of the month compared with 93,400 a.f. a year ago.

Deschutes River reservoirs all hold less water than last year on this date. Crane Prairie contained about 38,600 acre feet at the end of January compared with 48,100 a.f. last year. Wickiup held 134,570 acre feet compared with 189,500 a.f. a year earlier. And Crescent Lake held 53,300 acre feet compared with 63,100 a.f. the previous year.

STREAMFLOW

Forecasts of expected streamflow for 1967 in the April through September period are as follows:

Station	Volume	Percent of 1948-62 Average
Crooked R. above Prineville Reservoir	130,000 acre feet	104 percent
Ochoco net inflow	33,000 acre feet	103 percent
Deschutes below Snow Creek	71,000 acre feet	95 percent
Crane Prairie reservoir inflow	135,000 acre feet	94 percent

continued on next page

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

Station	Volume	Percent of 1948-1962 Average
Crescent Creek at Crescent Lake	31,000 acre feet	94 percent
Little Deschutes near Lapine	105,000 acre feet	93 percent
Deschutes at Benham Falls	678,000 acre feet	107 percent
Squaw Creek near Sisters	56,000 acre feet	100 percent
Tumalo Creek near Bend	54,000 acre feet	100 percent

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creeks	Average	Average
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Average
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Average	Average
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrig. Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Average	Average
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

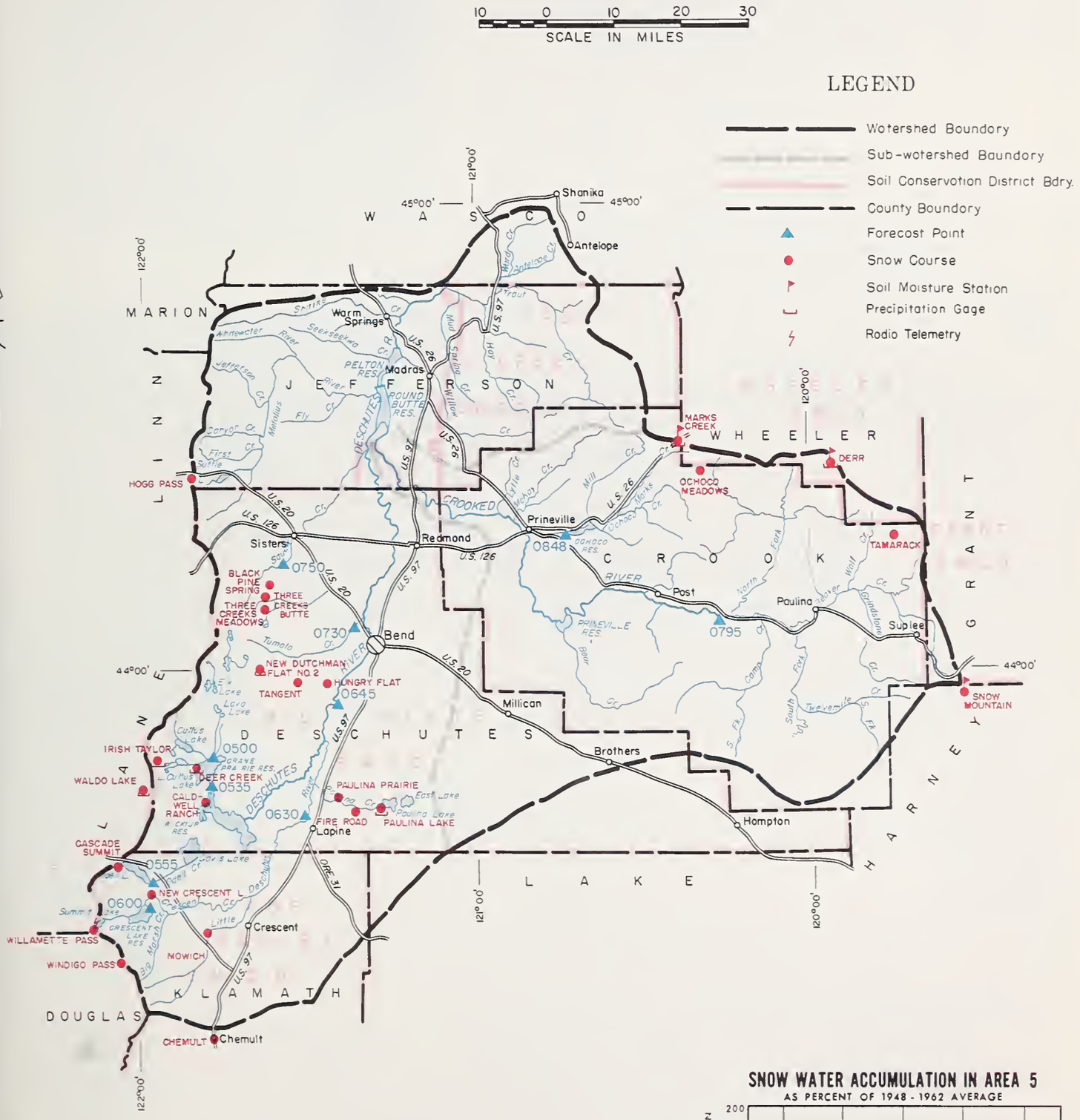
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Crane Prairie	55.3	38.6	48.1	42.6
Crescent Lake	86.9	53.3	63.1	49.5
Ochoco	47.5	17.8	23.7	21.1
Prineville	153.0	100.1	93.4	- -
Wickiup	200.0	136.1	189.5	161.7

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	160	Feb.-Sept.	171	94
		135	April-Sept.	143	94
0600	Crescent at Crescent Lake[d]	30	March-July	30	100
		31	April-Sept.	33	94
0795	Crooked near Post	216	Feb.-July	201	107
		130	April-Sept.	125	104
0645	Deschutes at Benham Falls[d]	440	April-July	417	106
		678	April-Sept.	631	107
0500	Deschutes below Snow Creek	83	Feb.-Sept.	89	93
		71	April-Sept.	75	95
0630	Deschutes, Little near Lapine[d]	126	Feb.-July	130	97
		105	April-Sept.	113	93
0848	Ochoco Reservoir net Inflow	51	Feb.-June	50	102
		33	April-Sept.	32	103
0555	Odell near Crescent	32	April-Sept.	34	94
0750	Squaw near Sisters	56	April-Sept.	56	100
0730	Tumalo near Bend[d]	54	April-Sept.	54	100

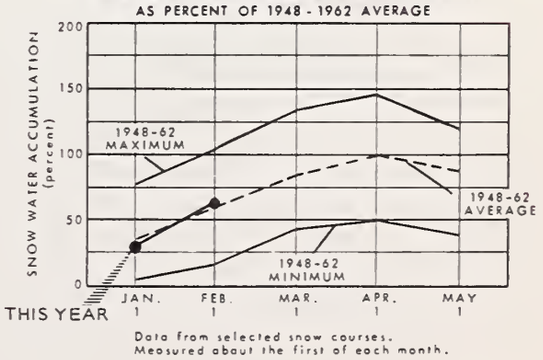
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 5

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

Upper Deschutes, Crooked Watersheds

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Derr	5670	24	9.0	1-30-67	7.9	6.8	8.4
Marks Creek	4540	36	14.1	1-27-67	12.1	11.3	13.8
Snow Mountain	6300	48	16.7	2-2-67	14.3	12.0	16.3

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Black Pine Spring	4600	2/1	9	1.9c	6.3	4.1 h
Caldwell Ranch	4400	1/30	34	9.4	11.2	9.2 h
Cascade Summit	4880	1/30	65	21.5	25.0	21.9
Chemult	4760	1/31	36	10.0	12.3	9.1
Deer Creek	4554	1/30	45	13.4	15.1	- -
Derr	5670	1/30	26	7.6	7.0	6.9
Fire Road	5050	1/27	23	5.5	6.6	5.9 h
Hogg Pass	4755	1/31	83	27.4	34.7	29.0
Hungry Flat	4400	2/1	22	5.0	9.9	5.8 h
Irish Taylor	5500	1/30	82	26.0	23.8	26.8 h
Marks Creek	4540	1/27	16	5.1	5.4	3.6
Mowich	4700	1/27	31	7.5	7.6	5.1 h
New Crescent Lake	4800	1/27	45	11.8	13.5	12.4 h
New Dutchman Flat #2	6400	2/1	109	40.2	39.6	33.5 h
Ochoco Meadows	5200	2/1	29	8.1	8.4	7.8
Paulina Lake	6330	1/27	55	14.8	14.0	15.5 h
Paulina Prairie	4285	1/27	10	2.4	4.9	1.9 h
Snow Mountain	6300	2/2	36	10.9	6.9	- -
Tamarack	4800	1/27	19	4.4	4.6	- -
Tangent	5400	2/1	65	19.0	22.7	16.8 h
Three Creeks Butte	5200	2/1	26	7.7	12.0	8.8 h
Three Creeks Meadows	5650	2/1	38	11.8	18.4	13.9 h
Waldo Lake	5500	1/28	65	21.7	20.4	22.6 h
Willamette Pass	5600	1/25	92	26.0	31.3	28.5 h
Windigo Pass	5800	1/26	101	27.7	31.1	29.4

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, orchardists and other water users in the Hood River-Wasco County area can expect below average water supplies in the spring and summer of 1967. Forecasts of streamflow for the spring and summer period are 15 to 20 percent below the 15-year average, 1948-62.

SNOW COVER

Water content of the mountain snowpack in the local watersheds was 86 percent of average on February first compared with 118 percent average exactly one year ago. The warmer than usual temperatures accompanying the winter storms has brought rain instead of snow to the snowpack area on several occasions.

SOIL MOISTURE

Watershed soils under the snowpack are apparently well wetted and will favor snow-melt runoff in the spring. The extra wetness this year can be attributed to direct rainfall and some mid-winter snow-melt over the entire watershed.

RESERVOIR STORAGE

Wasco reservoir, also known as Clear Lake, had about 1,650 acre feet in storage on February first. This is the same amount of storage as reported last year on this date but snow cover this year will provide less than half the amount of water that was available last year for this reservoir.

STREAMFLOW

Forecasts of expected streamflow for the 1967 period April through September range between 12 and 23 percent below normal as follows:

Station	Volume	Percent of 1948-62 Average
White R. below Tygh Valley	154,000 acre feet	88 percent
Hood R., West Fk. near Dee	138,000 acre feet	77 percent
Hood R. near Hood River	305,000 acre feet	80 percent

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek)	Fair	Fair
Badger Creek	Average	Fair
Dee Irrigation District	Fair	Fair
East Fork Irrig. Dist.	Average	Fair
Farmers Irrigation Dist.	Fair	Fair
Hood River Irrig. Dist.	Fair	Fair
Juniper Flat	Fair	Fair
Middle Fork Irrig. Dist.	Fair	Fair
Mile Creeks	Fair	Fair
Mill Creek	Fair	Fair
Mount Hood Irrig. Dist.	Fair	Fair
Rock-Gate-Threemile Crs.	Fair	Fair
Tygh Creek	Fair	Fair
White River	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	11.9	1.6	1.6	- -

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
1210	Hood River near Hood River[d]	274	April-July	322	85
		305	April-Sept.	381	80
1185	Hood, West Fork near Dee	127	April-July	155	82
		138	April-Sept.	179	77
1015	White below Tygh Valley	136	April-July	158	86
		154	April-Sept.	176	88

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Brooks Meadows	4300	*c*				6.9[h]
Clear Lake	3500	1/31	15	4.6	12.0	12.1[h]
Clear Lake (Experimental)	3500	1/31	31	8.5	16.2	- -
Cooper Spur	3490	2/1	16	5.5	14.2	12.0
Greenpoint Reservoir	3400	1/29	22	8.4	19.5	
Knebal Springs	3850	*c*				
Lambert Point	7000	*b*				
Parkdale	1770	2/1	0	0.0	4.0	- -
Phlox Point	5400	1/30	105	41.1	41.6	39.7
Red Hill	4400	1/29	49	20.3	35.0	30.2
Still Creek	3670	1/30	35	13.2	20.8	17.0
Switchback	3255	2/1	17	6.1	17.2	- -
Tilly Jane	6000	1/22	75	25.2	35.3	28.2
Ulrich Ranch Junction	3350	*c*				
Umbrella Falls	5400	2/2	122	42.9	- -	- -
Upper Valley	2530	2/1	0	0.0	8.4	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

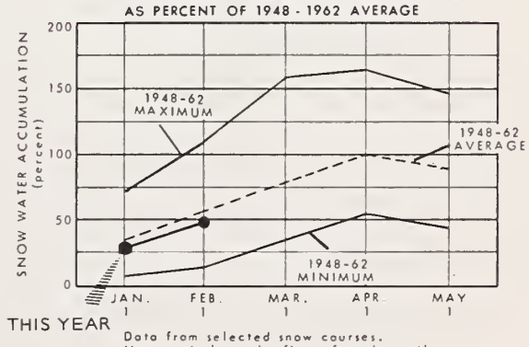


LEGEND

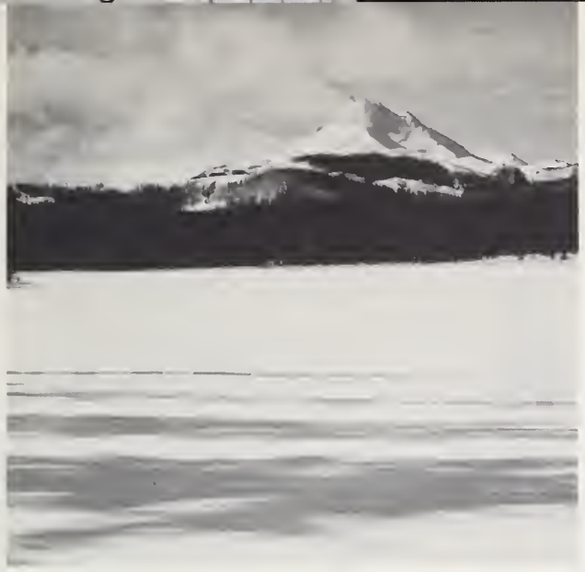
- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station
- Precipitation Gage
- Temperature Gage
- Radio Telemetry

SNOW WATER ACCUMULATION IN AREA 6

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.



Area 7

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Irrigation water demand was high during the 1966 season. With belaw average streamflow, reservoir storage was depleted to meet these demands. Storage for irrigation is generally less than average and much less than the favorable carry-over storage that existed a year ago. Streamflow prospects increased to near or above average during January. Streamflow farecasts now range near average with above average flows in prospect for the main Columbia, the Clark Fork, and the Kootenay.

SNOW COVER

Snow cover is now near average for midwinter over most of the basin. However, snowpack in the heavy water producing areas near the Continental Divide and on the upper Columbia in Canada is much above average. Many high elevation courses are at near a record high for this date, equaling an average for April 1. At lower mountain elevations the snowpack tends toward average. This is credited to above average temperatures during snow accumulation periods.

SOIL MOISTURE

Soil moisture conditions are typical far this date in most of the basin, probably wetter than average on the extreme upper Columbia.

STREAMFLOW

In January for the first time in over a year the flow of the Columbia at The Dalles, Oregon was above average. The records by months for the 1967 water year are as follaws:

Month	Percent of Average Discharge (1948-62)
October	79 (Adjusted for starage)
November	80 " " "
December	96 " " "
January	109 " " "

*Preliminary data furnished by Current Records Center, U. S. Gealogical Survey, Portland, Oregan.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
1057	Columbia at The Dalles	84,000 119,520	April-June April-Sept.	74,100 108,500	113 110

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW[d] (1,000 A.F.) APR. — SEPT.	APR. — JUNE	MAY — JUNE	PEAK (1,000 c.f.s.)	DATE
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1948-62 Avg.	108,500	74,100	60,200	633	
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES 118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

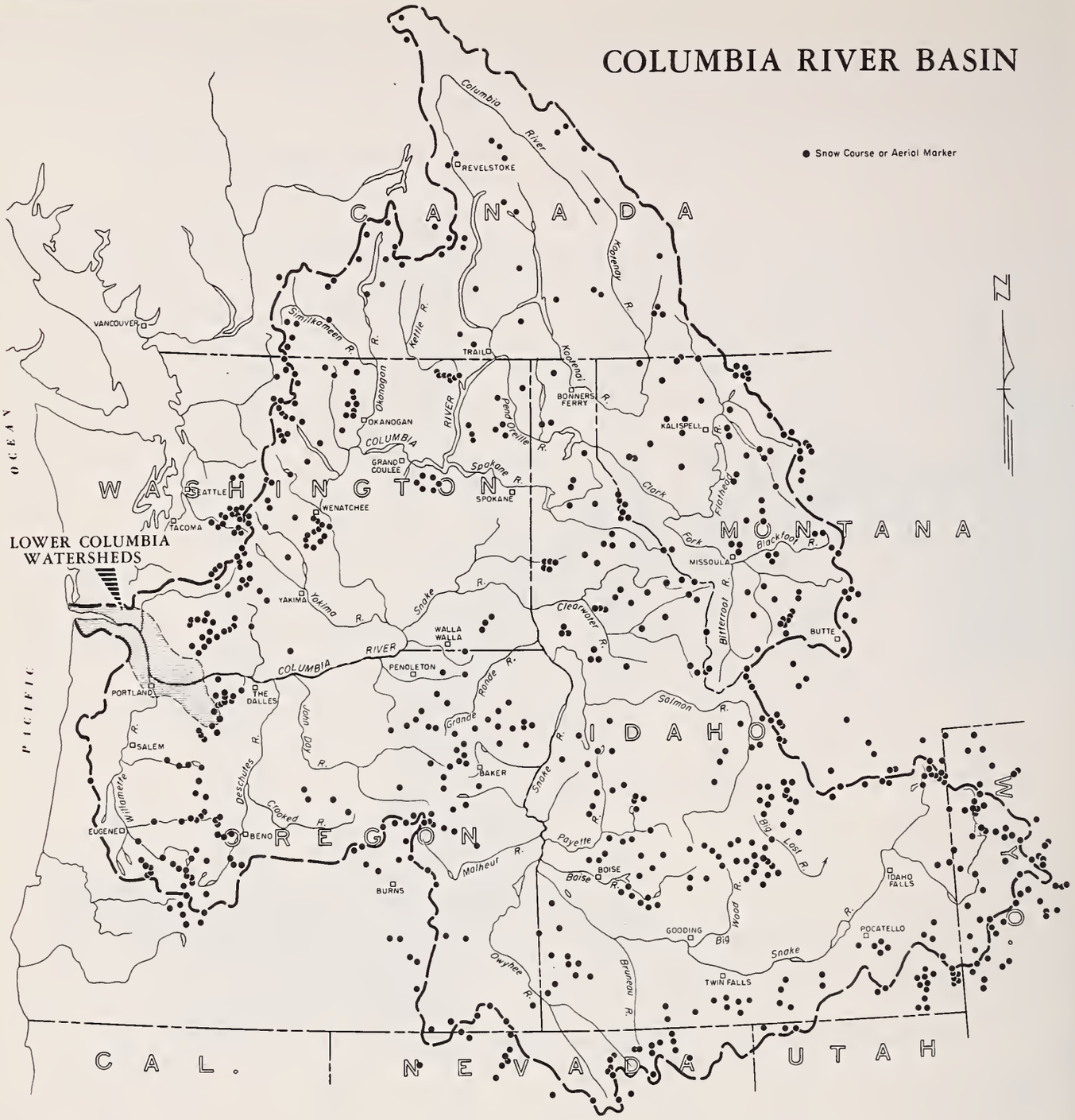
LOWER COLUMBIA WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course
- Temperature
- Radio Telemetry



"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

The outlook for 1967 spring and summer water supplies in the Willamette Valley is close to average in spite of warmer than normal temperatures which accompanied several heavy storms and caused rainfall rather than snowfall over most mountain stations.

SNOW COVER

Water content of the mountain snowpack in local watersheds has increased during the month of January to about 97 percent of the 15 year average (1948-62). This year's snow cover is still about 20 percent less than that measured one year ago.

SOIL MOISTURE

Accumulation of moisture in top four feet of soil mantle under the snowpack is now close to average for February first.

RESERVOIR STORAGE

Water held about February first in the multiple-purpose reservoirs in the Willamette Valley watersheds is only slightly above the usual levels for this date.

STREAMFLOW

Forecasts of expected streamflow in the April through September period of 1967 are as follows:

Station	Volume	Percent of 1948-62 Average
Clackamas R. at Estacada	778,000 acre feet	87 percent
North Santiam at Mehama	857,000 acre feet	86 percent
South Santiam at Waterloo	585,000 acre feet	87 percent
McKenzie R. near Vida	1,270,000 acre feet	91 percent
Middle Fork Willamette below No. Fk.	885,000 acre feet	91 percent
Row River near Dorena	104,000 acre feet	93 percent
Willamette R. at Salem	4,940,000 acre feet	89 percent

Flow of smaller streams heading in watersheds of lower elevations will fall off earlier than usual unless favorable precipitation occurs at the opportune time.

These forecasts are made with the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Average	Average
Clackamas	Average	Average
McKenzie	Average	Average
Molalla	Average	Average
Santiam, North	Average	Average
Santiam, South	Average	Average
Willamette, Coast Fork	Average	Average
Willamette, Middle Fork	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottage Grove	30.0*	7.7	0.1	1.6
Cougar	155.2*	27.7	0.0	- -
Detroit	299.9*	78.4	0.9	30.1[m]
Dorena	70.5*	31.3	0.1	5.6[m]
Fall Creek	115.0*	18.2	- -	- -
Fern Ridge	94.2*	32.9	0.2	18.7
Hills Creek	200.0*	46.9	1.0	- -
Lookout Point	337.2*	54.6	1.0	26.9[m]
Timothy Lake	61.7	53.2	45.0	39.5

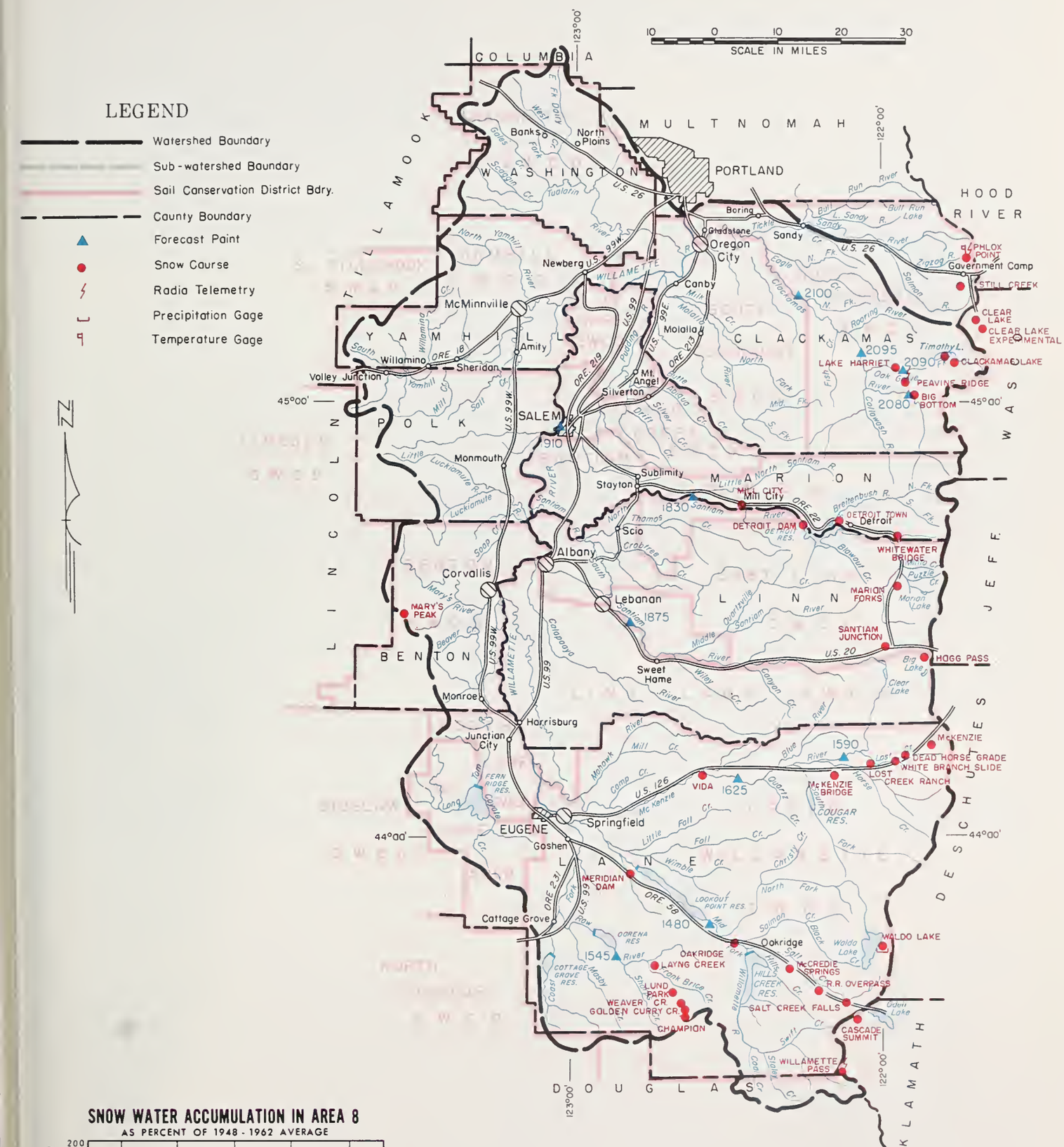
*Multiple purpose reservoir--space reserved primarily for flood runoff.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
2080	Clackamas at Big Bottom	135	April-July	150	90
		171	April-Sept.	184	93
2100	Clackamas at Estacada	670	April-July	770	87
		778	April-Sept.	890	87
2095	Clackamas above Three Lynx	522	April-July	584	89
		616	April-Sept.	683	90
1590	McKenzie at McKenzie Bridge	463	April-July	502	92
		604	April-Sept.	658	92
1625	McKenzie near Vida	1050	April-July	1144	92
		1270	April-Sept.	1392	91
2090	Oak Grove Fork above Power Intake	140	April-July	147	95
		180	April-Sept.	190	95
1545	Row near Dorena	99	April-July	108	92
		104	April-Sept.	112	93
1830	Santiam, North at Mehama[d]	762	April-July	884	86
		857	April-Sept.	991	86
1875	Santiam, South at Waterloo	550	April-July	637	86
		585	April-Sept.	675	87
1840	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge[d]	780	April-July	863	90
		885	April-Sept.	968	91
1910	Willamette at Salem[d]	4410	April-July	5040	88
		4940	April-Sept.	5566	89

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	1948-62 AVERAGE
Big Bottom	2118	1/31	2	1.0	10.3	4.5[h]
Cascade Summit	4880	1/30	65	21.5	25.0	21.9
Champion	4500	1/31	53	18.8	30.7	18.8
Clackamas Lake	3400	[c]				
Clear Lake	3500	1/31	15	4.6	12.0	6.9[h]
Clear Lake (Experimental)	3500	1/31	31	8.5	16.2	12.1[h]
Dead Horse Grade	3800	2/1	34	12.0	15.3	13.7[h]
Detroit Town	1610	1/31	0	0.0	5.2	2.5[h]
Detroit Dam	1580	1/31	0	0.0	0.0	0.8[h]
Golden Curry Creek	3136	1/31	T	T	13.2	5.4[h]
Hogg Pass	4755	1/31	83	27.4	34.7	29.0
Lake Harriet	2045	[c]				
Layng Creek	1200	1/31	0	0.0	0.0	0.3[m]
Lost Creek Ranch	1956	2/1	T	T	8.4	3.9[h]
Lund Park	1740	1/31	0	0.0	0.0	1.5[h]
Marion Forks	2730	1/31	25	8.9	15.8	10.5
Marys Peak	3620	2/4	8	3.2	- -	5.2[m]
McCredie Springs	2120	1/30	0	0.0	T	1.2[h]
McKenzie	4800	2/1	82	32.4	35.9	30.4
McKenzie Bridge	1372	2/1	0	0.0	0.0	1.7[h]
Meridian Dam	750	1/30	0	0.0	0.0	T[h]
Mill City	826	1/31	0	0.0	0.0	0.2[m]
Oakridge	1310	1/30	0	0.0	0.0	T[h]
Peavine Ridge	3500	2/1	-	10.8	19.0	12.5
Phlox Point	5400	1/30	105	41.1	41.6	39.7
Railroad Overpass	2750	1/30	0	0.0	6.3	3.4[h]
Salt Creek Falls	4000	1/30	38	4.2	16.8	11.4[h]
Santiam Junction	3990	1/31	51	17.0	26.3	17.8
Still Creek	3670	1/30	35	13.2	20.8	17.0
Timothy Lake	3295	[c]				
Vida	800	2/1	0	0.0	0.0	0.5[h]
Waldo Lake	5500	1/28	65	21.7	20.4	22.6[h]
Weaver Creek	2440	1/31	0	0.0	2.1	1.6[h]
White Branch Slide	2800	2/1	17	5.8	9.8	5.4[h]
Whitewater Bridge	2175	1/31	6	2.2	8.7	5.3[h]
Willamette Pass	5600	1/25	92	26.0	31.3	28.5[h]
RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATIONS						
			Time			
Peavine Ridge	3500	2/1	2:50 A.M.	10.8	16.5	- -
Phlox Point	5 00	2/1	2:50 A.M.	44.8	38.5	- -

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
ROGUE, UMPQUA, WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in the Umpqua-Rogue watersheds can expect near average water supplies in the spring and summer of 1967. Soil moisture is near average and reservoired water supplies are fairly adequate.

SNOW COVER

Water content of the mountain snowpack on local watersheds is about 99 percent of average for February first but also about 25 percent less than on this date last year. Total precipitation has been greater than normal but because temperatures were much above normal during some storms it fell as rain and not as snow.

SOIL MOISTURE

Moisture in the top four feet of the soil mantle under the snowpack has increased to about average for this date.

RESERVOIR STORAGE

Stored water in the three reservoirs of the Talent Irrigation District now totals 72,300 acre feet compared with 76,200 acre feet held in storage last year on this date.

The Medford Irrigation District had about 8 to 10,000 acre feet of storage on February first compared with 16,700 a.f. last year. This is a low storage supply but predicted streamflow can fill Fish Lake but probably will not fill Fourmile.

STREAMFLOW

Forecasts of expected streamflow in the April through September period of 1967 are as follows:

Station	Volume	Percent of 1948-62 Average
North Umpqua below Lemolo Reservoir	156,000 acre feet	84 percent
Clearwater above Trap Creek	67,000 acre feet	89 percent
Rogue above Prospect	324,000 acre feet	91 percent
Rogue at Raygold near Central Point	879,000 acre feet	88 percent
Applegate near Copper	153,000 acre feet	108 percent
Illinois River at Kerby	212,000 acre feet	100 percent

Flow of some of the smaller streams heading in low-elevation watersheds will probably fall off a little earlier than usual with resultant late water shortages.

If flow of Rogue River at Raygold should be less than here forecasted the Grants Pass Irrigation District could find it necessary to go to canal alternation.

continued on next page

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

These forecasts are made with the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Average	Fair
Applegate River, Big	Average	Average
Applegate River, Little	Average	Average
Ashland Creek	Average	Average
Butte Creek, Big	Average	Average
Butte Creek, Little	Average	Average
Cow Creek	Average	Fair
Deer Creek	Average	Average
Elk Creek	Average	Average
Emigrant Creek (abv. Res.)	Average	Average
Evans Creek	Average	Fair
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Average	Fair
Illinois River, East Fork	Average	Average
Illinois River, West Fork	Average	Average
Jump-off-Joe Creek	Average	Fair
Neil Creek	Average	Average
Red Blanket Creek	Average	Average
Rogue River	Average	Average
Sucker Creek	Average	Fair
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Average	Fair
Wagner Creek	Average	Average
Williams Creek	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Emigrant Gap	39.0	29.6	22.6	21.3*
Fish Lake	7.8	4.0	7.5	5.1
Fourmile Lake	16.1	4.1[e]	9.2	8.5
Howard Prairie	60.0	32.2	42.9	- -
Hyatt Prairie	16.1	10.5	10.7	7.1

*Average for years of record after reconstruction.

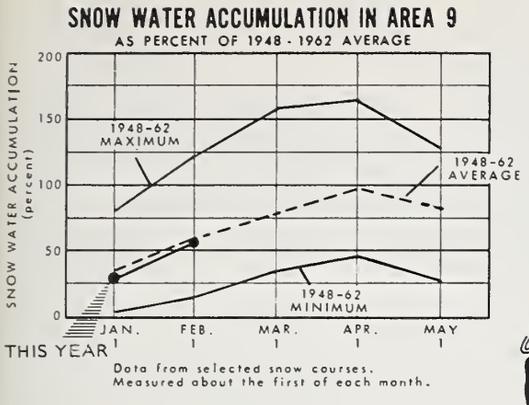
[e]Estimated.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3620	Applegate near Copper	153	April-Sept.	142	108
3145	Clearwater above Trap Creek[d]	67	April-Sept.	75	89
5045	Fourmile Lake net Inflow[d]	6.3	April-Sept.	6.6	95
		7.2	Feb.-Sept.	7.0	103
5140	Hyatt Reservoir net Inflow[d]	6.5	April-Sept.	6.4	102
3770	Illinois River at Kerby	365	March-July	348	105
		212	April-Sept.	212	100
3425	Little Butte, No. Fk. at Fish Lake nr. Lake Cr.[d]	13.9	April-Sept.	16.0	87
3415	Little Butte, So. Fork near Lake Creek	36	April-July	38	95
	Note: Minimum flow will drop to 100 c.f.s. by June 1.				
3280	Rogue above Prospect	270	April-July	295	92
		324	April-Sept.	355	91
3320	Rogue, South Fork near Prospect[d]	71	April-July	70	102
		82	April-Sept.	82	100
3350	Rogue below South Fork	556	April-July	611	91
		679	April-Sept.	754	90
3590	Rogue at Raygold near Central Point	727	April-July	837	87
		879	April-Sept.	1001	88
3615	Rogue at Grants Pass	864	April-Sept.	993	87
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls[d]	156	April-Sept.	186	84

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- ⊔ Precipitation Gage
- ϟ Radio Telemetry

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Althouse	4530	1/30	16	5.9	18.5	4.7 [h]
Annie Spring	6018	1/26	94	29.1	32.6	29.4
Beaver Dam Creek	5100	1/27	38	11.8	11.1	- -
Big Red Mountain	6500	2/1	73	25.4	24.6	20.8 [h]
Billie Creek Divide	5300	1/25	48	13.4	15.4	16.7 [h]
Caliban	6500	1/30	84	27.5	- -	- -
Champion	4500	1/31	53	18.8	30.7	18.8
Cold Springs Camp	6100	1/26	78	22.4	20.8	- -
Deadwood Junction	4600	1/27	29	8.4	9.2	- -
Diamond Crater Summit	5800	1/23	74	19.5	25.6	- -
Diamond Lake	5315	1/23	54	12.6	20.7	16.7
Eden Valley Summit	2390	Delayed	Report		11.2	- -
Fish Lake	4865	1/31	26	*	- -	10.6 [h]
Fourmile Lake	6000	[c]				
Grayback Peak	6000	1/25	63	18.5	30.1	17.9 [h]
Howard Prairie	4500	1/27	31	8.7	9.1	- -
Hyatt Prairie Reservoir	4900	1/27	23	6.8	8.8	6.6 [h]
King Mountain #1	4800	[b]				
King Mountain #2	3646	[b]				
King Mountain #3	2550	[b]				
King Mountain #4	1779	[b]				
Little Red Mountain	6500	2/1	55	20.4	25.4	15.1 [h]
Mt. Ashland Switchback	6400	1/30	88	26.0	- -	- -
North Umpqua	4215	1/30	33	11.7	16.3	11.7 [h]
Page Mountain	4045	1/30	8	3.4	16.0	4.0 [h]
Park Headquarters	6450	1/26	116	37.7	39.2	37.3
Red Butte #1	4560	[b]				
Red Butte #2	4000	[b]				
Red Butte #3	3500	1/25	11	2.0	12.6	- -
Red Butte #4	3000	1/25	8	2.0	9.0	- -
Red Butte #5	2500	[b]				
Red Butte #6	2000	[b]				
Seven Lakes #1	6800	1/30	111	40.6	37.3	36.9 [h]
Seven Lakes #2	6200	1/30	83	30.3	28.8	27.2 [h]
Silver Burn	3720	1/27	40	10.4	18.7	10.5
Siskiyou Summit	4630	1/28	32	9.5	13.4	6.8
Ski Bowl Road	6000	1/30	80	23.3	- -	- -
South Fork Canal	3500	1/27	10	2.6	9.1	3.4
Trap Creek	3800	1/30	28	11.0	13.4	9.8 [h]
Whaleback	5140	2/2	65	22.2	30.4	23.1 [h]
Windigo Pass	5800	1/26	101	27.7	31.1	29.4

*Not measured.

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in the Klamath Basin can expect near average water supplies in the spring and summer of 1967. Mountain snowpacks are slightly above average, watershed soils are well wetted and storage reservoirs now contain near average amounts of water.

SNOW COVER

Water content of the mountain snowpack on local watersheds is about 105 percent of the February first average compared with 110 percent average a year ago. Warmer than normal temperatures occurring during some recent winter storms caused rain to fall instead of snow over the entire watershed.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is up to at least 71 percent of capacity which is slightly wetter than usual.

RESERVOIR STORAGE

Stored water supplies are close to average for this date but are less than last year on Lost River. Clear Lake contains 176,400 acre feet compared with 219,600 a.f. last year. Gerber reservoir contains 39,200 acre feet compared with 51,800 a.f. a year ago. Upper Klamath Lake held 335,000 acre feet on February first compared with 272,900 a.f. a year ago.

STREAMFLOW

Forecasts of expected streamflow in the February through September period of 1967 are as follows:

Station	Volume	Percent of 1948-62 Average
Sprague River near Chiloquin	352,000 acre feet	90 percent
Williamson R. below Sprague	631,000 acre feet	92 percent
Inflow to Upper Klamath Lake	928,000 acre feet	93 percent
Gerber Reservoir Inflow	51,000 acre feet	106 percent
Clear Lake Reservoir Inflow	104,000 acre feet	106 percent

These forecasts are made with the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Average	Average
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Average
Sprague River	Average	Average
Upper Klamath Lake	Average	Average
Williamson River	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	440.2	176.4	219.6	188.4
Gerber	94.0	39.2	51.8	30.5
Upper Klamath Lake	584.0	335.0	272.9	347.1

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

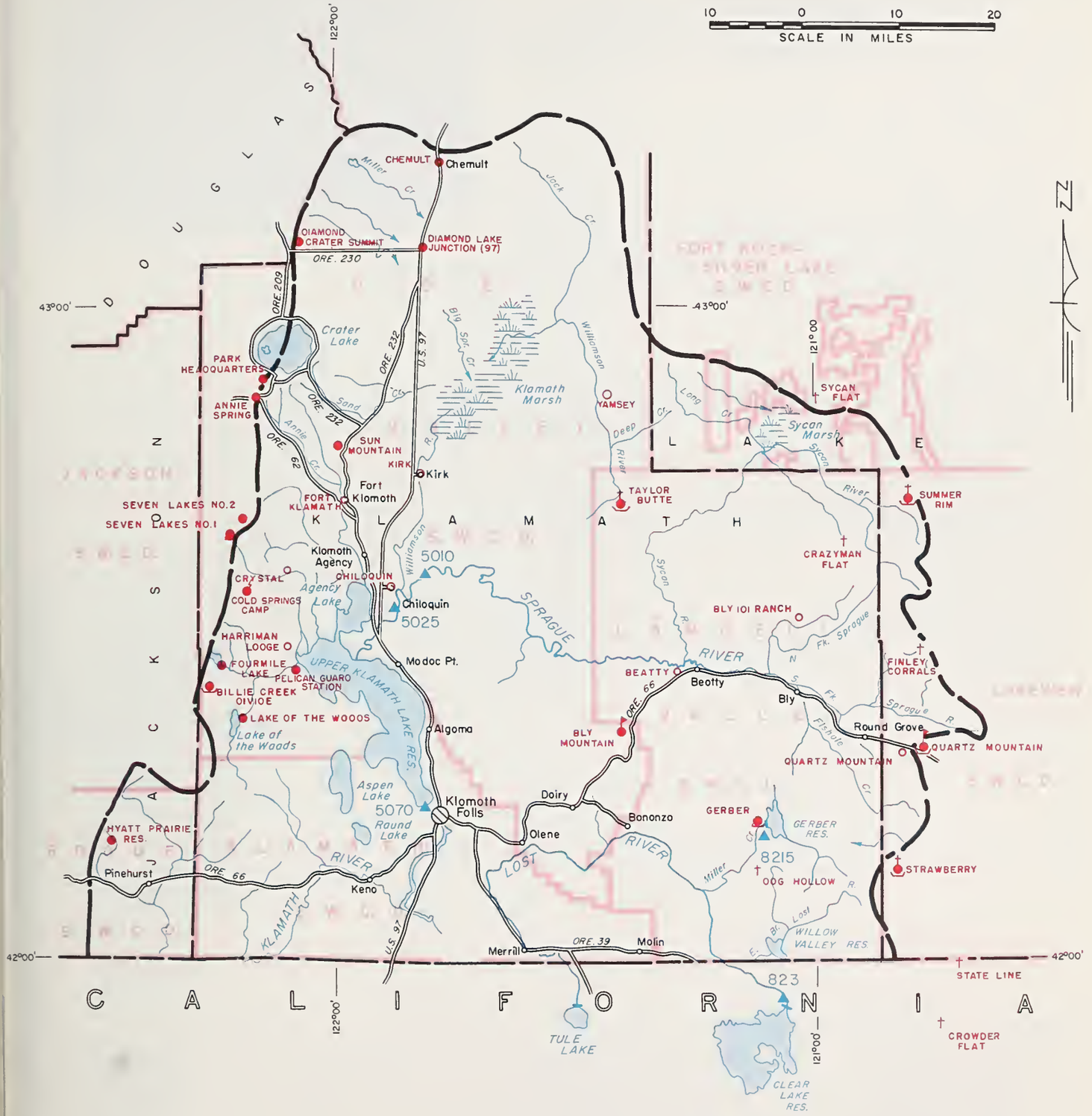
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[l]
NO.	NAME				
823	Clear Lake Reservoir Inflow[k]	104	Feb.-June	98	106
8215	Gerber Reservoir Inflow[k]	51	Feb.-June	48	106
5010	Sprague near Chiloquin	352	Feb-Sept.	390	90
		272	April-Sept.	289	94
5070	Upper Klamath Lake Net Inflow[k]	928	Feb.-Sept.	1002	93
		610	April-Sept.	639	95
5025	Williamson below Sprague River	631	Feb.-Sept.	683	92
		468	April-Sept.	490	96

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bly Mountain	5090	42	14.0	1-20-67	9.9	- -	12.8

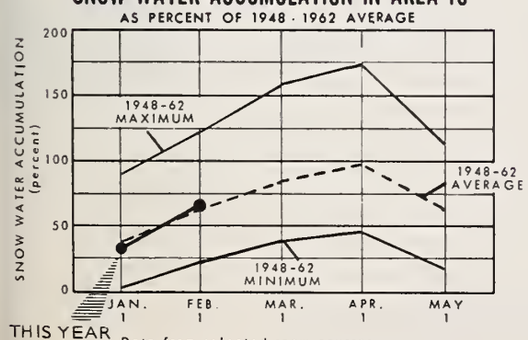
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 10

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage
- Radio Telemetry

OR-10c

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Annie Spring	6018	1/26	94	29.1	32.6	29.4
Beatty (PP&L)	4300	1/31	0	0.0	- -	0.4
Billie Creek Divide	5300	1/25	48	13.4	15.4	16.7 [h]
Bly Mountain	5090	1/20	16	4.3	- -	4.5 [m]
Bly 101 Ranch (PP&L)	4800	1/30	4	1.1	3.0	1.8
Chemult	4760	1/31	36	10.0	12.3	9.1
Chiloquin (PP&L)	4187	1/31	7	0.9	3.2	2.2
Cold Springs Camp	6100	1/26	78	22.4	20.8	- -
Crazyman Flat [e]	6100	1/31	34	9.5	6.7	6.2 [m]
Crowder Flat [e] (Calif.)	5200	2/1	11	3.1	2.8	2.7 [m]
Crystal (PP&L)	4200	1/30	28	7.6	10.2	7.6
Diamond-Crater Summit	5800	1/23	74	19.5	25.6	- -
Diamond Lake Junction (97)	4600	1/23	17	3.6	7.5	- -
Dog Hollow [e]	4900	1/31	0	0.0	0.8	1.0 [m]
Finley Corrals [e]	6000	1/31	42	11.8	8.7	10.2 [m]
Fort Klamath (PP&L)	4150	1/30	14	5.2	5.1	4.1
Fourmile Lake	6000	[c]				
Gerber	4850	1/31	5	3.4	2.9	2.4 [h]
Harriman (PP&L)	4200	1/31	12	4.1	5.0	3.7
Hyatt Prairie Reservoir	4900	1/27	23	6.8	8.8	6.6 [h]
Kirk (PP&L)	4533	No	Report		9.8	6.1
Lake of the Woods	4960	1/29	22	6.0	9.0	9.6
Park Headquarters	6450	1/26	116	37.7	39.2	37.3
Pelican Guard Station	4150	1/25	8	2.1	4.6	- -
Quartz Mountain	5320	1/31	22	7.0	6.5	5.6
Quartz Mountain (PP&L)	5504	1/31	27	8.4	7.1	5.3
Seven Lakes #1	6800	1/30	111	40.6	37.3	36.9 [h]
Seven Lakes #2	6200	1/30	83	30.3	28.8	27.2 [h]
State Line [e] (Calif.)	5750	2/1	22	6.2	7.3	6.0 [m]
Strawberry	5760	2/2	26	7.8	6.6	6.6 [h]
Summer Rim	7200	1/31	54	15.1	11.2	8.3 [m]
Sun Mountain	5350	1/20	41	10.6	17.7	18.4
Sycan Flat [e]	5500	1/31	26	8.1	5.9	5.6 [m]
Taylor Butte	5100	1/24	20	4.9	5.5	4.7 [h]
Yamsey (PP&L)	4600	No	Report		- -	3.6

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers and other water users in Lake County can expect better than average water supplies in the spring and summer of 1967 unless winter temperatures that are much above average should prevail in the area.

SNOW COVER

Water content of the mountain snowpack on local watersheds has increased to 132 percent of the February first average compared with 103 percent average one year ago.

SOIL MOISTURE

Moisture content of the top four feet of soil mantle under the snowpack is now about 70 percent of capacity--up about 3 percent from last month and 8 percent ahead of last year at this date. These wet soils will greatly favor runoff from snow-melt in the spring.

RESERVOIR STORAGE

Stored water in Cottonwood reservoir was 700 acre feet on January first and has undoubtedly increased during the past month although no measurement was made on February first because of impassable roads.

Drews Valley reservoir contained 26,932 acre feet on February first compared with 32,500 a.f. average and 41,300 acre feet last year on this date. As of this date a satisfactory runoff into the reservoir is expected.

STREAMFLOW

Forecasts of expected streamflow for 1967 in the March through June period are as follows:

Station	Volume	Percent of 1948-62 Average
Drew Reservoir net Inflow	58,000 acre feet	123 percent
Twentymile near Adel	30,000 acre feet	107 percent
Deep Cr. above Adel	94,000 acre feet	120 percent
Honey Cr. near Plush	23,000 acre feet	128 percent
Chewaucan R. near Paisley	114,000 acre feet	128 percent

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River	Excellent	Average
Crooked Creek	Average	Average
Deep Creek	Average	Average
Dry Creek	Average	Average
East Side Goose Lake	Average	Average
Guano Lake	Average	Average
Honey Creek	Excellent	Average
Lakeview Water Users Assn.	Average	Average
Rock Creek (Hart Mtn.)	Average	Average
Silver-Buck Creeks	Average	Average
Summer Lake	Excellent	Average
Thomas Creek	Excellent	Average
Twentymile Creek	Average	Average
Warner Lakes	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottonwood	8.7	*b*	*b*	2.8*
Drews	63.0	26.9	41.3	32.5
Thompson Valley	17.4	*b*	- -	- -

*Average for years of record after reconstruction.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3840	Chewaucan near Paisley	114	March-June	89	128
3715	Deep above Adel	94	March-June	78	120
3385	Drew Reservoir net Inflow	58	March-July	47	123
3785	Honey near Plush	23	March-June	18.0	128
3660	Twentymile near Adel	30	March-June	28	107

SOIL MOISTURE

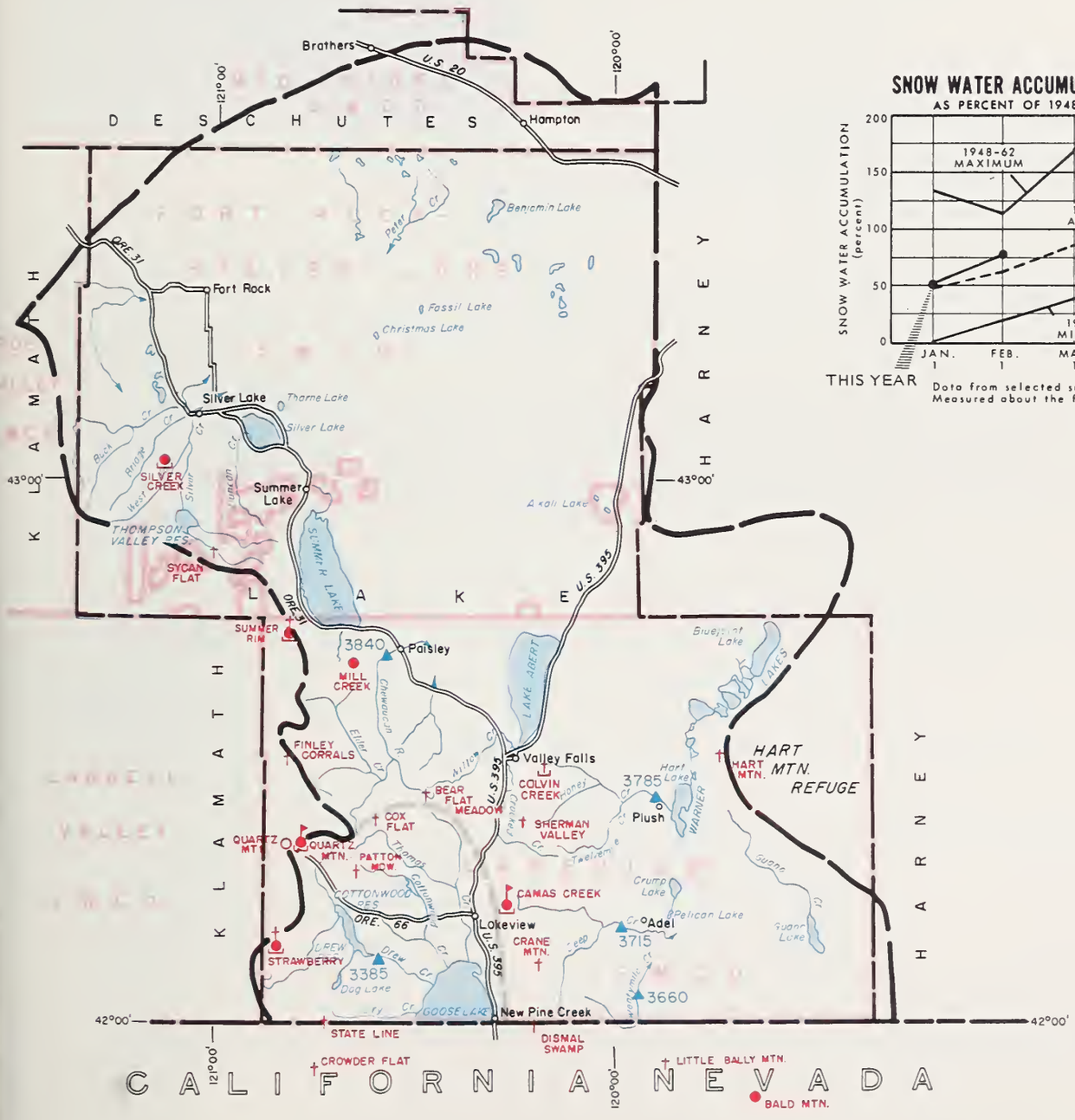
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek	5720	42	14.5	1-30-67	12.0	11.4	13.0
Quartz Mountain	5320	48	15.3	1-31-67	8.9	7.0	10.4

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1948-62 AVERAGE
Bald Mountain (Nev.)	6720	*c*				
Bear Flat Meadow[e]	5900	2/1	34	9.5	6.2	5.2 *m*
Camas Creek	5720	1/30	29	9.2	6.8	7.9
Cedar Pass (Calif.)	7100	2/1	42	11.1	7.4	10.0
Colvin Creek[e]	6550	1/30	18	5.6	4.5	- -
Cox Flat[e]	5750	1/31	26	7.8	6.7	5.2 *m*
Crane Mountain[e]	6020	1/31	6	1.7	0.8	4.1 *m*
Crowder Flat[e] (Calif.)	5200	2/1	11	3.1	2.8	2.7 *m*
Dismal Swamp[e] (Calif.)	7000	1/31	48	13.4	9.2	8.2 *m*
Finley Corrals[e]	6000	1/31	42	11.8	8.7	10.2 *m*
Hart Mountain[e]	6350	1/30	4	1.1	1.1	0.9 *m*
Little Bally Mountain[e] (Nev.)	6600	1/31	12	3.4	1.1	- -
Mill Creek	6200	*c*				
Patton Meadows[e]	6800	2/1	46	12.9	10.1	- -
Quartz Mountain (PP&L)	5504	1/31	27	8.4	7.1	5.3
Quartz Mountain	5320	1/31	22	7.0	6.5	5.6
Sherman Valley[e]	6600	1/30	30	8.4	5.0	7.4 *m*
Silver Creek	4900	2/2	10	2.7	4.1	3.4 *h*
State Line[e] (Calif.)	5750	2/1	22	6.2	7.3	6.0 *m*
Strawberry	5760	2/2	26	7.8	6.6	6.6 *h*
Summer Rim[e]	7200	1/31	54	15.1	11.2	8.3 *m*
Sycan Flat[e]	5500	1/31	26	8.1	5.9	5.6 *m*

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 11

AS PERCENT OF 1948 - 1962 AVERAGE

Data from selected snow courses. Measured about the first of each month.

N

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of

February 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers and other water users in Harney Basin can expect near average to slightly above average water supplies in the spring and summer of 1967.

SNOW COVER

Water content of the mountain snowpack in local watersheds was about 101 percent of the February first average compared with only 65 percent of the average one year ago. Warmer than usual temperatures accompanying the winter storms has produced rain rather than snow on several occasions even at high elevations. This has prevented exceptionally good accumulation of snow on the mountains.

SOIL MOISTURE

Watershed soils under the snowpack are now wet up to 80 percent of their capacity compared with 69 percent one year ago. These figures apply to the north half of the basin. No reports on soil moisture have been received from the south half of the basin.

STREAMFLOW

Forecasts of expected streamflow for the 1967 period April through September are as follows:

Station	Volume	Percent of 1948-62 Average
Silvies River near Burns	110,000 acre feet	111 percent
Silver Creek near Riley	26,000 acre feet	118 percent
Donner und Blitzen R. near Frenchglen	59,000 acre feet	95 percent
Trout Creek near Denio	11,900 acre feet	141 percent

These forecasts are made on the assumption that near average precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Average	Average
Cow Creek	Average	Average
Donner und Blitzen River	Average	Average
Mill-Coffeepot Creeks	Average	Average
Rattlesnake Creek	Average	Average
Silver Creek	Average	Average
Silvies River	Average	Average
Soldier-Prather Creek	Average	Average
Trout Creek	Excellent	Excellent
Whitehorse Creek	Excellent	Excellent

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of February 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	52	March-June	59	88
		59	April-Sept.	62	95

SOIL MOISTURE

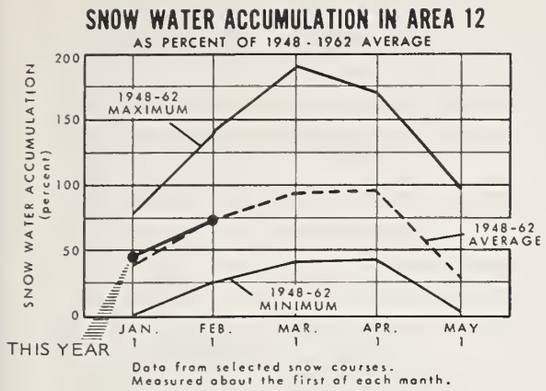
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Springs	5900	42	16.9	1-30-67	9.7	6.8	13.0
Fish Creek	7900	48	15.0	*c*			
Folly Farm	4450	30	12.5	*c*			
Silvies	6900	48	16.4	*c*			
Snow Mountain	6300	48	16.7	2-2-67	14.3	12.0	16.3
Starr Ridge	5150	36	10.6	1-31-67	10.4	6.4	10.3
Stinking Water Summit	4800	48	21.9	*b*			
Willow-Bald	5000	24	6.6	2-2-67	6.4	3.8	6.4

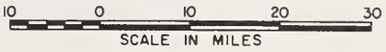
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Blue Mountain Springs	5900	1/30	36	10.8	6.3	10.8
Buck Pasture[e]	5700	2/5	9	2.7	1.3	- -
Buckskin Lake[e]	5200	2/5	T	T	0.8	- -
Call Meadows[e]	5340	2/5	10	3.0	1.8	- -
Crow Camp[e]	5500	2/5	4	1.2	1.2	- -
Delintment Lake	5600	2/1	22	6.2	6.2	- -
Denio Creek[e]	6000	2/5	4	1.2	0.8	- -
Disaster Peak (Nev.)	6500	*b*				
Emigrant Butte	5000	2/1	13	4.0	2.1	- -
Fish Creek[e]	7900	2/5	57	17.1	9.6	- -
Hart Mountain[e]	6350	1/30	4	1.1	1.1	0.9[m]
Idlewild Camp	5200	1/30	14	4.2	3.2	4.2
Izee Summit	5293	1/27	24	6.5	3.8	6.2[h]
Lake Creek R. S.	5120	1/30	24	7.0	3.8	5.8[m]
Oregon Canyon[e]	6950	2/5	28	8.4	1.1	- -
Rock Spring	5100	1/30	14	4.0	3.5	4.2
Silvies[e]	6900	2/5	8	2.4	2.3	- -
Snow Mountain	6300	2/2	36	10.9	6.9	- -
Starr Ridge	5150	1/31	16	3.6	3.1	4.6[h]
Stinking Water	4800	1/30	6	2.0	1.6	3.3[h]
Trout Creek[e]	7800	2/5	32	9.6	1.8	- -
"V" Lake[e]	6600	2/5	22	6.6	1.7	- -

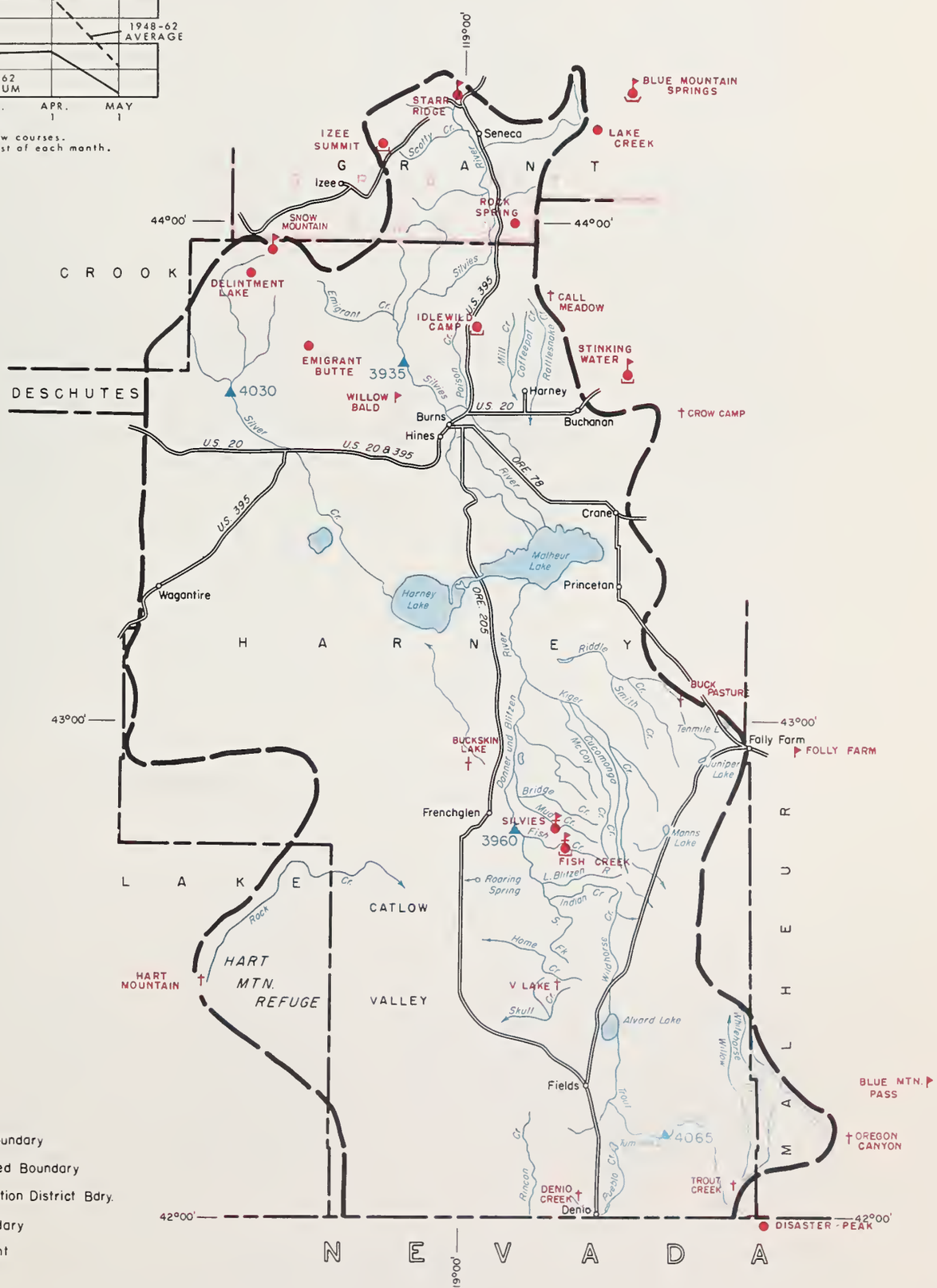
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS









LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- † Aerial Snow Depth Gage
- ⚑ Soil Moisture Station
- ⌴ Precipitation Gage

"The Conservation of Water begins with the Snow Survey"

NUMBER	NAME	LOCATION SEC.	TWP.	RGE.	ELEV.

OWYHEE, MALHEUR WATERSHEDS (1)

Owyhee River

Antelope Ridge	(Ida)	20	8S	1E	5300
Battle Creek	(Ida)	10	11S	1E	5700
Bear Creek	(Nev)	31	46N	58E	7800
Big Creek	1(Nev)	31	46N	56E	6700
Big Sand	(Nev)	30	45N	56E	6300
Big Sand		4	38S	42E	5290
Blue Mtn Peak	(Nev)	25	45N	39E	6700
Bonebrake, Lower	(Nev)	33	45N	39E	7200
Bonebrake, Upper	(Nev)	29	42N	5W	5600
Bull Basin	(Nev)	31	44N	53E	6650
Columbia Basin	(Nev)	8	47N	54E	6500
Disaster Peak	(Nev)	2	45N	52E	7000
Fawn Creek		4	33S	33E	7900
Fish Creek		8	30S	38E	4450
Folly Farm Summit		33	46N	58E	6800
Fox Creek	(Nev)	31	43N	54E	6700
Fry Canyon	(Nev)	31	45N	56E	6600
Gold Creek	(Nev)	22	42N	39E	7800
Granite Peak	(Ida)	31	8S	2W	5800
Hyde Pasture	(Nev)	18	42N	53E	6800
Jack Creek, Lower	(Nev)	28	42N	53E	7250
Jack Creek, Upper	(Nev)	9	42N	53E	8420
Jess Creek	(Nev)	28	42N	53E	8420
Jordan Valley		0	30S	46E	4390
Juniper Creek	(Nev)	13	42N	38E	6000
Laurel Draw	(Nev)	20	45N	53E	6700
Lookout Butte		2	40S	47E	5650
Lucas Canyon		27	40S	44E	6440
Martin Creek	(Nev)	18	44N	40E	6700
Merritt Mountain	(Nev)	10	46N	54E	7000
Midas	(Nev)	18	39N	46E	7200
Mud Flat	(Ida)	34	9S	2W	5500
Oregon Canyon		8	40S	40E	6950
Quinn Ridge	(Nev)	9	47N	41E	6300
Red Canyon	(Ida)	32	11S	4W	6500
Rodeo Flat	(Nev)	36	43N	53E	6800
76 Creek	(Nev)	6	44N	58E	7100
Silver City	(Ida)	6	5S	3W	6400
Silvies		35	32S	32½E	6900
South Mountain No.2	(Ida)	10	2S	5W	6340
Succor Creek	(Ida)	25	3S	5W	6100
Taylor Canyon	(Nev)	35	39N	53E	6200
Toe Jam	(Nev)	29	40N	50E	7700
Tremewan Ranch	(Nev)	9	39N	55E	5700
Triangle	(Ida)	25	7S	3W	5150
Trout Creek		10	41S	38E	7800
Wild Lake		31	35½S	32½E	6600
Vaught Ranch	(Ida)	10	11S	1W	5950
War Eagle	(Ida)	20	5S	3W	7700

Malheur River

Barney Creek		16	14S	36E	5950
Blue Mountain Spring		21	15S	35E	5900
Buck Pasture		21	29S	35E	5700
Bully Creek		10	17S	37E	5300
Call Meadows		29	20S	33E	5340
Cottonwood-Indian		10	19S	39E	4320
Crane Prairie		24	16S	34E	5375

NUMBER	NAME	LOCATION SEC.	TWP.	RGE.	ELEV.
18F8a	Crow Camp				(2)
18E20	Eldorado Pass		Unsurveyed		
18E26a	Flag Prairie	29	14S	36E	4600
18E18	Lake Creek	32	16S	36E	4750
18E22a	Logan Valley	10	16S	33½E	5120
18F1	Rock Spring	13	16S	33½E	5100
18E32p	S. Fk. Willow Cr.	23	18S	32E	5100
18F4MP	Stinking Water	2	16S	37E	5500
		33	21S	34E	4800

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

Burnt River

Barney Creek		16	14S	36E	5950
Blue Mountain Summit		6	12S	36E	5098
Dooley Mountain		32	11S	40E	5430
Eldorado Pass		20	14S	38E	4600
Gold Center		21	9S	36E	5340
Tipton		34	10S	35½E	5100

Powder River

Anthony Lake		18	7S	37E	7125
Anthony Ski Hill					
Bourne		33	8S	37E	5800
Dooley Mountain		32	11S	40E	5430
Ellertson Meadows		18	8S	38E	5400
Gold Center		21	9S	36E	5340
Goodrich Lake		4	9S	38E	6775
Intake House		5	8S	38E	4930
Ladd Summit		5	6S	39E	3730
Little Alps		10	7S	37E	6200
Little Antone		1	7S	37E	5000
Power Plant		33	7S	38E	3990
Taylor Green		3	6S	42E	5740

Pine Creek

Schneider Meadows		35	6S	45E	5400

Grande Ronde River

Aneroid Lake No. 1		16	4S	45E	7480
Aneroid Lake No. 2		16	4S	45E	7300
Anthony Lake		18	7S	37E	7125
Bald Mountain		14	4S	41E	6700
Beaver Reservoir		8	5S	37E	5340
County Line		28	4S	34E	4800
Lucky Strike		28	3S	32E	5050
Meacham	24 & 25		1S	35E	4300
Mirror Lake		34	4S	44E	8200
Moss Spring		28	3S	41E	5850
Schoolmarm		28	4S	34E	4775
Standley		28	2S	42E	7400
Taylor Green		3	6S	42E	5740
Tollgate		31	4S	38E	5070
TV Ridge		12	2S	43E	7000

Imnaha River

Aneroid Lake No. 1		16	4S	45E	7480
Aneroid Lake No. 2		16	4S	45E	7000
Big Sheep		33	4S	46E	6200

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

Umatilla River

Arbuckle Mountain		33	4S	29E	5400
Athena-Weston Summit		21	4N	35E	1700
Battle Mountain Summit		29	3S	31E	4340
Emigrant Springs		29	1N	35E	3925
Lucky Strike		28	3S	32E	5050
Meacham	24 & 25		1S	35E	4300
Tollgate		32	4N	39E	5070
Walla Walla Diversion		22	6N	38E	2400

Walla Walla River

Blue Mountain Camp		35	4N	37E	4300
Tollgate		32	4N	38E	5070
Weston Mountain		25	4N	35E	2700

Willow Creek

Arbuckle Mountain		33	4S	29E	5400
Anthony Lake		18	7S	37E	7125

NUMBER	NAME	LOCATION SEC.	TWP.	RGE.	ELEV.

UPPER JOHN DAY WATERSHEDS (4)

Upper John Day River

Arbuckle Mountain		33	4S	29E	5400
Battle Mountain Summit		29	3S	31E	4340
Beech Creek Summit		4	12S	30E	4800
Blue Mountain Spring		21	15S	35E	5900
Blue Mountain Summit		6	12S	36E	5098
Derr		14	13S	23E	5670
East Fork Canyon		15	15S	32E	5700
Gold Center		21	9S	36E	5340
Indian Cr. Butte		5	15S	33E	6550
Izee Summit		28	16S	29E	5293
Lucky Strike		28	3S	32E	5050
Marks Creek		25	12S	19E	4500
Ochoco Meadows		21	13S	20E	5200
Olive Lake		14	9S	31E	6000
Schoolmarm		28	4S	34E	4775
Snow Mountain		1	19S	26E	6300
Starr Ridge		20	15S	31E	5150
Tipton		34	10S	35½E	5100
Williams Ranch		20	15S	32E	4500

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

Upper Deschutes River

Black Pine Spring		14	16S	9E	4600
Caldwell Ranch		30	21S	8E	4200
Cascade Summit		7	23S	6E	4880
Chemult		21	27S	8E	4760
Deer Creek		25	20S	7E	4554
Fire Road		36	21S	11E	5050
Hogg Pass		24	13S	7½E	4755
Hungry Flat		30	18S	11E	4400
Irish-Taylor		25	20S	6E	3500
Mowich		29	25S	25E	4700
New Crescent Lake		11	24S	6E	4800
New Dutchman Flat #2		21	18S	9E	6400
Paulina Lake		34	21S	12E	6330
Paulina Prairie		28	21S	11E	4285
Tangent		28	18S	10E	5400
Three Creeks Butte		27	16S	9E	5200
Three Creek Meadows		34	16S	9E	5650
Waldo Lake		15	21S	6E	5500
Willamette Pass		33	24S	5½E	5600
Windigo Pass		32	25S	6E	5800

Crooked River

Derr		14	13S	23E	5670
Marks Creek		25	12S	19E	4540
Ochoco Meadows		21	13S	20E	5200
Snow Mountain		1	19S	26E	6300
Tamarack		8	15S	25E	4800

HOOD, MILE CREEKS LOWER DESCHUTES WATERSHEDS (6)

Hood River

Brooks Meadows		2	2S	10E	4300
Cooper Spur		6	2S	10E	3490
Greenpoint Reservoir		28	2N	9E	3200
Knebal Springs		31	1S	11E	3850
Parkdale		6	1S	10E	1770
Phlox Point		6	3S	9E	5600
Red Hill		20	1S	9E	4400
Still Creek		25	3S	8½E	3700
Tilly Jane		15	2S	9E	5000
Ulrich Ranch Junction		28	1S	11E	3350
Umbrella Falls		3	3S	9E	5400
Upper Valley		20	1S	10E	2530
Switchback		28	1S	9E	3255

Mile Creek - Mosier Creek

Brooks Meadows		2	2S	10E	4300
Knebal Springs		31	1S	11E	3350
Ulrich Ranch Junction		28	1S	11E	3350

Lower Deschutes River

Clear Lake		29	4S	9E	3500
Clear Lake Experimental		29	4S	9E	3500
Hogg Pass		24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

Sandy River

Phlox Point		6	3S	9E	5500
Still Creek		25	3S	8½E	3700

WILLAMETTE WATERSHEDS (8)

Clackamas River

Big Bottom		25	6S	7E	2118
Clackamas Lake		35	5S	8½E	3400
Clear Lake		29	6S	9E	3500
Lake Harriet		4	6S	7E	2045
Peavine Ridge	14 & 15		6S	7E	3500
Phlox Point		6	3S	9E	5600
Still Creek		25	3S	8½E	3700
Timothy Lake		26	5S	8E	3295

Santiam River

Detroit (town)		1	10S	5E	1610
Detroit Dam		7	10S	5E	1520
Hogg Pass		24	13S	7½E	4755
Marion Forks		28	11S	7E	2730
Mill City		29	9S	3E	826
Santiam Junction		14	13S	7E	3999
Whitewater Bridge		28	10S	7E	2175

McKenzie River

Dead Horse Grade		13	16S	7E	3800
Lost Creek Ranch		24	16S	6E	1956
McKenzie		35	15S	7½E	4200
McKenzie Bridge		13	16S	5E	1327
Vida		28	16S	2E	400
White Branch Slide		15	16S	7E	2800

NUMBER	NAME	LOCATION SEC.	TWP.	RGE.	ELEV.

Middle Fork Willamette River

Cascade Summit		7	23S	6E	4880
McCredie Springs		36	21S	4E	2120
Meridian Dam		13	19S	1W	740
Oakridge		16	21S	1E	1410
Railroad Overpass		21	22S	5E	2750
Salt Creek Falls		32	22S	5½E	4000
Waldo Lake		15	21S	6E	5500
Willamette Pass		33	24S	5½E	5600

Coast Fork Willamette River

Champion		12	23S	1E	4500
Golden Curry Creek		1	24S	1E	3136
Layng Creek R. S.		31	21S	1E	1200
Lund Park		22	22S	1E	1740
Weaver Creek		35	22S	1E	2440

Mary's River

Mary's Peak		21	17S	7W	3620

ROGUE, UMPQUA WATERSHEDS (9)

Rogue River

Althouse		17	41S	7W	4530
Annie Spring		19	31S	6E	6018
Beaver Dam Creek		1	39S	4E	5100
Big Red Mountain		31	40S	1W	6500
Billie Creek Divide		30	36S	5W	5900
Caliban		16	40S	1E	6500
Deadwood Junction		8	39S	4E	4600
Diamond-Crater Summit		34	28S	6E	5800
Fish Lake		1	37S	4E	4865
Fourmile Lake		9	36S	5E	6000
Grayback Peak		9	40S	5W	6000
Howard Prairie		32	38S	2E	4500
Hyatt Prairie Reservoir		15	39S	1E	4900
King Mountain No. 1		8	33S	4W	4800
King Mountain No. 2		33	32S	4W	3626
King Mountain No. 3		29	32S	4W	3550
King Mountain No. 4		20	33S	4W	3770
Little Red Mountain		25	40S	7W	6500
Mt. Ashland Switchback		15	40S	1E	6200
Page Mountain		8	41S	7W	4745
Park Headquarters		8	31S	6E	6450
Seven Lakes No. 1		1	34S	5E	6800
Seven Lakes No. 2		26	33S	5E	6700
State Line	(Cal)	21	48N	11E	5750
Strawberry		4	40S	1E	5760
Summer Rim		15	33S	1E	7200
Sun Mountain		22	32S	7½E	5350
Sycan Flat		24	31S	14E	5550
Taylor Butte		22	33S	11E	5160
Tolo		19	34S	2E	2000
Tolo Mountain		19	34S	2E	3200
Trapper Creek		1	27S	4E	3800
Whitehawk		1	31S	2E	5120
Windigo Pass		20	25S	6E	5800

Umpqua River

Champion		12	23S	1E	4500
Diamond Lake		29	27S	6E	5315
Eden Valley Summit		10	28S	10W	2390
North Umpqua		19	26S	6E	4715
Red Butte No. 1		36	29S	2W	4560
Red Butte No. 2		30	29S	1W	4000
Red Butte No. 3		30	29S	1W	3500
Red Butte No. 4		36	29S	1W	3000
Red Butte No. 5		20	29S	1W	2500
Red Butte No. 6		17	29S	1W	2000
Trap Creek		1	27S	4E	3800
Whitehawk		1	31S	2E	5120
Windigo Pass		20	25S	6E	5800

KLAMATH WATERSHEDS (10)

Klamath River

Annie Spring		19	31S	6E	6018
Billie Creek Divide		30	36S	5E	5300
Bly Mountain	15 & 22		39S	11E	5090
Chemult		21	27S	8E	4760
Cold Springs Camp		12	35S	5E	6100
Crazyman Flat		9	34S	15E	6100
Crowder Flat	(Cal)	30	47N	11E	5200
Diamond-Crater Summit		34	28S	6E	5800
Diamond Lake Jct. (Or)		1	29S	7E	4600
Dog Hollow		1	40S	14E	4900
Finley Corrals		11	36S	16E	6000
Fourmile Lake		9	36S	5E	6900
Gerber		12	30S	13E	4850
Hyatt Prairie Reservoir		15	39S	1E	4900
Howard Prairie		32	38S	2E	4500
Lake of the Woods		11	38S	5E	4969
Park Headquarters		8	31S	6E	6450
Pelican Guard Station		9	36S	6E	4150
Quartz Mountain		2	30S	16E	5320
Seven Lakes No. 1		1	34S	5E	6800
Seven Lakes No. 2		26	33S	5E	6700
State Line	(Cal)	21	48N	11E	5750
Strawberry		4	40S	1E	5760
Summer Rim		15	33S	1E	7200
Sun Mountain		22	32S	7½E	5350
Sycan Flat		24	31S	14E	5550
Taylor Butte		22	33S	11E	5160
Tolo		19	34S	2E	2000
Tolo Mountain		19	34S	2E	3200
Trapper Creek		1	27S	4E	3800
Whitehawk		1	31S	2E	5120
Windigo Pass		20	25S	6E	5800

Trout and Whitehorse Creeks

Bonito Creek		14	41S	3E	6000
Dimmitor Peak	(Nev)	8	47N	3E	6550
Oregon Canyon		9	40S	20E	6950
Trout Creek		10	41S	38E	7800

Harney Lake

Buckskin Lake		2	30S	30E	5700

NUMBER	NAME	LOCATION SEC.	TWP.	RGE.	ELEV.

Pacific Power and Light Company's Snow Stations

1	Bentty (PP&L)	22	36S	12E	4300
10	Bly 101 Ranch (PP&L)	22	35S	14E	4800
3	Chiloquin (PP&L)	34	34S	7E	4187
4	Crystal (PP&L)	26	34S	6E	4200
5	Fort Klamath (PP&L)	22	33S	7½E	4150
6	Kirk (PP&L)	1	33S	7E	4533
7	Quarts Mountain (PP&L)	33	37S	16E	5504
8	Harriman Lodge (PP&L)	1	36S	6E	4200
12	Yamsay (PP&L)	20	31S	11E	4600

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

Goose Lake

20015a	Bear Flat Meadow	27	36S	19E	5900
20038MP	Camas Creek	5	39S	21E	5720
20011a	Cox Flat	16	37S	18E	5750
20016a	Crane Mountain	13	40S	21E	6020
20017a	Crowder Flat (Cal)	30	47N	11E	5200
20018a	Dismal Swamp (Cal)	31	48N	16E	7200
20017a	Patton Meadow	28	38S	18E	6800
20038MP	Quarts Mountain	2	38S	16E	5320
20018a	State Line (Cal)	21	48N	11E	5750
20039AP	Strawberry	4	40S	16E	5760

Abert Lake

20015a	Bear Flat Meadow	27	36S	19E	5900
20018AP	Colvin Creek	12	38S	21E	6550
20011a	Cox Flat	16	37S	18E	5750
20014a	Finley Corrals	11	36S	16E	6000
2000L	Hill Creek	1	34N	17E	6200
20038MP	Quarts Mountain	2	38S	16E	5320
20010a	Sharman Valley	15	37S	21E	6600

Summer Lake

20039AP	Summer Rim	15	33S	16E	7200

Silver Lake

21012P	Silver Creek	25 & 26		9E	4900
20011a	Wyoma Flat	25	31S	13E	5500

Warner Lake

20038MP	Camas Creek	5	39S	21E	5720
20016a	Crane Mountain	13	40S	21E	6020
20018a	Dismal Swamp (Cal)	31	48N	16E	7200
19011a	Hart Mountain	1	36S	25E	6350
19010a	Sharman Valley	15	37S	21E	6600

Guano Lake

19011	Bald Mountain (Nev)	17	45N	21E	6720
19011a	Hart Mountain	1	36S	25E	6350
19012a	Little Bully Mt. (Nev)	8	45N	19E	6600

HARNEY BASIN WATERSHED (12)

Silvies River - Silver Creek

18F7a	Call Meadows	29	20S	33E	5340
19F2	Dollntmont Lake	28	19S	26E	5600
19F3	Emigrant Butte	14	21S	27E	5000
18F3a	Idlewild Camp	29	20S	31E	5200
19F1	Lone Summit	34	19S	27E	5793
18F1	Rock Spring	13	18S	32E	5100
19F2a	Snow Mountain	1	19S	26E	6300
19F4MP	Silver Ridge	20	15S	31E	5150
18F4MP	Stinking Water	33	21S	34E	4800
18F5a	Willow-Buhl	19	22S	29E	5000

Donner Und Blitzen River

18F6a	Buck Pasture	21	20S	35E	5700
18F6MAP	Flat Creek	4	33S	32½E	7900
19F2a	Hart Mountain	1	36S	25E	6350
18F1MA	Silvina	35	20S	32E	6700
18F7a	98 Lake	31	35S	32E	6600

Trout and Whitehorse Creeks

18F6a	Bonito Creek	14	41S	3E	6000
18F1	Dimmitor Peak (Nev)	8	47N	3E	6550
17F5a	Oregon Canyon	9	40S	20E	6950
18F5a	Trout Creek	10	41S	38E	7800

Harney Lake

18F8a	Buckskin Lake	2	30S	30E	5700

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Snow Course
- PP&L Snow Station

SCALE IN MILES 0 20 40 60

1002	SNOW COURSE ONLY
1002W	SNOW COURSE AND SOIL MOISTURE
1002WA	SNOW COURSE, SOIL MOISTURE AND AERIAL MARKER
1002A	SNOW COURSE AND AERIAL MARKER
1002M	SOIL MOISTURE ONLY
1002A	AERIAL MARKER ONLY
1002P	SNOW COURSE AND PRECIPITATION GAGE
1002PG	PRECIPITATION GAGE ONLY
*	RADIO TELEMETRY

Map and Index to OREGON SNOW COURSES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS PORTLAND, OREG 1965 M-1874

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY
- Douglas County Water Resources Survey

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

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COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"